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The American Journal of Clinical Medicine

JANUARY

VOL 26

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A HAPPY NEW YEAR
TO ALL

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The American Journal of CLINICAL MEDICINE

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Vol. 26, No. 1

January, 1919

When the Boys Come Home

THE writer was in New York when the great ship Leviathan discharged a cargo of nearly 9000 returning soldiers, many of them wounded. Every day of our stay in the gay city of Gotham, one or more ships came in with their load of soldiers from France. The great flood is on, and already our boys are coming back to "the little old home town" which they left amid tears only a few short months ago. How different the homecoming! Mothers, sweethearts and wives are today bubbling over with joy and laughter, as they were overflowing with sorrow when the boys went away. Some of these will never return but, even for them, there is a sort of joy in the hearts of those dear to them because they faced the great crisis and died like men.

And, now, that the boys are coming home again, what are we going to do with them? Are we simply going to put them back in their old jobs and let it go at that? For many, perhaps most, this will be the answer to the question; but, there are thousands of our young men who can not be disposed of thus easily. They have seen another world and through contact with

thousands of other men in this country and other countries have learned to ask questions—and to some of these questions they are going to insist upon answers. Life can never be just the same as it was when the boys went away; primarily because they themselves are different, and because they have been factors in bringing about profound changes in the world itself.

As physicians, we know that these boys have helped us to settle some great problems of life and disease; and they know it. Most of them are better men physically than they were when they went away. They have learned to stand straight; they have put on weight and strength or rid themselves of superfluous fat. They have been guarded against venereal disease and protected against the ravages of strong drink. From a physical point view, army life is an ideal life. It makes stronger men, and, we believe, in some respects at least, better men. Are we going to let all this go by default when the boys come home?

No, we can not permit our boys to fall back again into the old ruts. What we have gained we must not lose. We believe

that there will be a demand for more thoughtful supervision of the youth of our nation. The boys themselves will demand it. They have seen the wisdom of physical training in their own lives, and they will demand it for others. While there is no need for a standing army in the United States and militarism, as such, must be at an end, there is a need for physical training like that given in the army; and, for this reason if for no other, we predict that some form of universal training will be provided.

One of the revelations of the draft system was the enormous amount of curable disease from which our young men are suffering—bad tonsils, bad teeth, hernias, varicocele, fallen arches, and underweight. Some system of training is needed to make men and women out of the millions of physically imperfect derelicts who go through life as cripples when they might be strong men and women. We predict that universal training for the future will take into account not only the physically sound, but those who are partially sound, so that it may be corrective of the entire life of the nation.

The social diseases must be eliminated. That is another of the lessons of the war. We must rid the nation of the habit of strong drink, of venereal disease, and of all other excesses that sap vitality. These are reforms which are bound to come and in which the medical profession is vitally interested.

In the industrial world, revolutionary changes are in progress. The writer suspects that our young men will bring back from Europe many ideas that to most of us will seem revolutionary. These ideas will be carried into the remote hamlets and will be discussed around every wayside country store. Just what effect this exchange of ideas between the old world and the new will have upon our social life, no one can tell; but, we have faith to believe that in the long run this effect will be good.

The Great World War marks the end of a great age and the beginning of a still greater one. As the last fifty years were characterized by an industrial growth that will remain one of the world's marvels, so, we may hope that the next generation will see the awakening of a great spiritual revolution that will mean far more for the enrichment of life than the railroad, the

telegraph, the telephone, the flying machine and the submarine.

It will be interesting to swap opinions with the boys about such things as these and to find out from them what kind of world they want to live in in the next fifty years. They have helped "make the world safe for democracy". What is their idea as to the meaning of the word "democracy"? We may find to our surprise that our boys know far more about these things than we do ourselves; and, naturally, the man who has lost a leg or an eye in a great cause will be asking himself and his neighbors whether the investment has paid out. Even a good job, or a public office, or a neat little farm, properly stumped and drained and financed by the Government, may not seem to him like quite pay enough for this loss. What will the great sacrifices in blood and treasure bring for compensation, in the way of happiness, opportunity, and growth for the men and women of the future?

The medical profession has sent a larger percentage of its membership into active service than any other. One doctor in five has worn Uncle Sam's uniform. More physicians have sacrificed their lives in proportion to their numbers than any other profession or trade. Not only have they stood beside the boys on the battlefield, but they have fought pestilence at home, where the risks were even greater than they were over there.

We wish we might give to the returning men of our profession that full tribute of praise that is in our hearts. In this war, as in every war, the doctor has risked most and sacrificed most, and in this war as in no other war, he has accomplished most. War is essentially and fundamentally destructive: medicine is preservative. Not thousands merely, but millions of soldiers owe their lives today to our profession. This, though true, may soon be forgotten. At this time there is no reason why the medical profession should not emphasize this great truth, if in so doing it can bring home to the universal consciousness the importance of the great preservative art for which we as physicians stand.

When the boys come home, the medical profession should make itself felt in every community. The great discoveries achieved on the battlefield should be carried to every nook and corner of America and made to

work for the enrichment of the life of the nation.

This is the message for the New Year we wish to leave with our readers.

Patients want to be treated. If physicians tell them that medicines are no good, they go to quacks who have, or pretend, confidence in their modes of treatment.

THE GENERAL PRACTITIONER, AND THE "FLU"

In the discussion of Doctor Croft's paper on the recent influenza epidemic (this journal, Dec. p. 895), Dr. G. Frank Lydston asserted that during this epidemic the medical practitioners were a rather panicky lot; that they had permitted themselves to become scared because of the unaccustomed symptom-complex confronting them and also because of the fact that there was known no definitely established bacterial etiology of the disease and, consequently—forsooth—no "scientific" treatment. Doctor Lydston declared that physicians were needlessly frightened and that it was absurd to try to treat a disease when there were patients presenting fairly clearcut symptoms of illness, and who could properly be treated "for what ailed them."

If it were not somewhat humiliating, it would be amusing to investigate this matter a little further. It is very true that physicians were in a panic and that this reflected upon the people, who, consequently, were literally scared to death. To make a diagnosis of influenza, was almost paramount to suggesting engaging the undertaker, and in many instances the mortality rate during this epidemic was unduly high. This is true especially for places where large numbers of people congregate, as, for instance, in military camps.

Is there any truth in the implication that the intensive pursuit of the *science* of medicine limits the mental horizon of the physician and makes him helpless when confronting unforeseen contingencies or symptom-complexes that he can not explain "scientifically"? When the attempt was made (and evidently with favorable results) to prevent disease following after exposure to infection and also to modify the severity of an actual attack, by means of combined bacterins containing at least the greater portion of the microorganisms encountered in the secretions of the patients, this

method was discouraged from "authoritative" sources, on the plea that it was not "scientifically" established. Yet, experiences with a "scientific" bacterin containing solely the influenza-bacillus were anything but favorable, while the result secured from the "unscientific" combined bacterin in question were decidedly encouraging.

The remark may be interpolated here—in parentheses, as it were—that the infectious origin and nature of this epidemic disease appears to us indubitable. This, despite the attempt of Doctor Croft to incriminate some far-reaching vitiation of the atmosphere that, according to him, constituted the primary etiologic factor, all infectious conditions being only of secondary occurrence—according to him.

However, while "scientific" physicians fretted and impatiently waited the O. K. of the laboratory for specific procedures that they might undertake for the treatment of influenza, the majority of general practitioners quietly proceeded to treat their patients sick with influenza, and the joke of it is that most of their patients recovered. In the words of Doctor Lydston, these general practitioners, whose names, to be sure, do not adorn the starry firmament of medical leaders, but, who, nevertheless, do a lot of good work, simply went ahead and treated their patients for what ailed them; regardless of the name of the trouble. And, how did they do it?

There was the intense aching all over the body and the marked fever-temperature, associated with severe headache. On general principles, the indication was clear for an intestinal cleanout. Hence, a saline laxative or castor-oil, in some instances preceded by calomel, was prescribed as a matter of course. This, to start things agoing. The fever, headache, and pain in general were controlled with acetylsalicylic acid, phenacetin or similar drugs; given carefully, to be sure, and often while guarding the heart with strychnine, digitalis, monobromated camphor, and so on; but, given to effect, that is, until the patient's distress was relieved.

Then there were the evidences of infection—irritation and inflammation in the upper respiratory passages, coryza, pharyngitis, lacrimation, and all the rest of them. Gargling with antiseptic solution and washing out or spraying the nares and the

EDITORIAL DEPARTMENT

gullet did much to relieve these symptoms, while iodized calcium loosened viscid secretions, in addition to its mildly antiseptic systemic effect.

Manifestly, there was a condition of severe toxemia, in all probability owing to the overwhelming of the organism by various bacteria, the isolation and recognition of which did not interest the practitioner as much as did the overcoming of the toxic sequels. On general principles, he proceeded to fill up his patient with calcium sulphide or with echinacea. The result was, that pretty soon the very sick man or woman or child felt decidedly easier, say, on the second or third day, and that what looked like a severe attack of illness in the making turned out to be—just influenza.

These or similar experience are reported by numerous general practitioners of our acquaintance. By prompt, definite, and positive medication along clearly indicated lines, these men succeeded in preventing complicating pneumonia in a great majority of cases, and they are justly proud of being able to show a surprisingly low mortality rate, as compared with that reported from many centers of medical learning where a monopoly seemed to be held on it.

Of course, it is quite natural that conditions should arise that make the physician look exceedingly grave and apprehensive of serious trouble. But, that a whole class of professional men such as physicians should permit themselves to be stampeded by a scare of a disease, even though they do not know its exact nature, is little short of ludicrous. For heaven's sake, let us keep our heads, no matter what happens. No disease is so pernicious that it does not present certain features that make it possible for us to apply common-sense measures and, ordinarily, to overcome it.

Living exclusively on fruits for a day or two is an excellent way to cleanse and disinfect the alimentary canal as much as it can be. Fruit juices are cooling to the blood and they help the kidneys to throw poisons out of the body.—Babu Balwant Singh, in "The Antiseptic."

DR. ROBERT GRAY IS EIGHTY-NINE

We have just received from Dr. Robert Gray, of Pichucaleo, Mexico, a letter and an article for THE CLINIC. In this, he reminds us that he has turned eighty-nine, and says that, despite his advanced age, he still is as well, physically and mentally, as he has been for many years, in fact,

feels younger. The article will appear in an early issue.

Since receiving this letter, a telegram has come in from Doctor Gray, reading as follows:

"Calcium sulphide prophylactic of Spanish influenza. Mail 10,000 one-grain tablets."

This is advice worth considering. Doctor Gray is a man of wide experience with calcium sulphide, so, when he says that it is useful in that disease, you can depend upon it that he knows, for, no man has used more of it than has our old friend Robert Gray.

"CARRY ON"

Carry On is a little journal issued by the office of the Surgeon-General, U. S. A., and intended for the information of those directly interested in the development of reconstruction work. No subscription-price is charged, and those men and women who come within the scope of "subscribers" may put in a request for copies. The editorial office, which is located at 311 Fourth Avenue, New York City, requests that persons asking for copies give, besides name and address, also their occupation.

The October-November number, which is number 4, contains various contributions dealing with what happens to the handicapped soldiers and sailors upon their discharge from the service. The vocational-rehabilitation law passed unanimously by Congress and signed by the President last June provides that it shall be the duty of the federal board for vocational education to see to it that every disabled soldier and sailor entitled to compensation under the war-risk insurance law is aided in getting his old job or securing a new one. The board is required, furthermore, to give to those handicapped men that need and desire training before going into employment so much education at the expense of the federal government as each man may elect; providing, of course, that his claims are reasonable and that his previous training and the nature of his handicap are not such as to make training useless.

Under this beneficent law, thousands of our returned men will have the opportunity of learning new and useful trades before they reenter industrial life. Its practical workings will go far toward less-

sening the discouragement and misery inevitably following upon the realization of serious injuries and mutilations suffered during the war.

It is the desire of the government to help in every way possible, to make all disabled soldiers over into useful and active members of the commonwealth, that they may not be a burden to anybody, least of all to themselves; rather, that they shall realize that not alone their government, but, their country is grateful for what has been done by our soldiers and is anxious to rehabilitate and reinstate all returned soldiers and sailors in useful and active occupations.

The man who holds the ladder at the bottom is often of more benefit to the world than the one who climbs to the top.

THE VENEREAL-DISEASE PROBLEM

One of the outstanding difficulties in the successful management of the problems presented by venereal diseases is, the old-established habit of people to make light of their afflictions and to treat themselves with the assistance and connivance of some unscrupulous or ignorant drug-clerk. The shelves of drugstores are filled with patent medicines that, in veiled, but, nevertheless, unmistakable language, promise a speedy cure for diseases that admittedly yield only to persistent and continued treatment carefully regulated according to the individual peculiarities of the patient and to given, momentary conditions.

Many attempts have been made to include venereal diseases among those that are notifiable and, consequently, subject to control of the health-authorities. As in so many other matters, any laws, rules, and regulations adopted could not be enforced unless the popular opinion was in favor of such enforcement; and while, with respect to venereal diseases, the disastrous "conspiracy of silence" still holds sway to a certain extent and the fetish of personal liberty is being invoked, in every possible way, the purposes of the health-department regulations are constantly being defeated.

Once popular opinion decides that venereal diseases, the socalled social diseases, constitute a serious menace to the social welfare, regulation of this problem will become possible. In the meanwhile, the carelessness of patients has been fostered by the

willingness of druggists to "help them out" by furnishing such remedies as are believed to be "good for" those maladies.

It is with a great deal of pleasure that we take cognizance of an announcement by the Owl Drug Company that, after December 1 last, no preparations for the self-treatment of venereal diseases will be sold in the 29 retail stores of that company located on the Pacific Coast and in the Middle West. When preparations of this nature are called for, the salesman is instructed to explain the new policy of this concern and to hand the customer a carefully prepared confidential circular, which explains the seriousness of all venereal diseases and the importance of consulting a reliable physician. A list of such will be furnished upon request.

Standard preparations, recognized by the medical profession, will be carried by the prescription-department, however, and sold only upon orders from a physician.

Some weeks previous to this announcement, the laboratories of the Owl Drug Company discontinued the manufacture of several preparations for self-treatment.

This innovation was decided upon after the management had given due consideration to the report of the Surgeon-General of the U. S. Army, which showed an alarming prevalence of venereal diseases among the civilians that were examined preparatory to entering the army.

The action of other druggists will be awaited with interest.

EYE LESIONS PRODUCED BY MUSTARD-GAS

The abrupt termination of the war brought an end to a large amount of interesting research-work. For instance, the introduction of poisonous gases in warfare made it necessary to develop means for combating them! American research-workers have been struggling valiantly with this difficult problem, and undoubtedly had it almost solved—possibly entirely solved. As to this, we do not know.

One of the most interesting pieces of work that we have seen is that conducted, at the University of Michigan, by Warthin, Weller, and Herrmann, upon methods of combating poisoning with dichlorethyl-sulphide, commonly known as mustard-gas. Mustard-gas, as almost everybody now knows, is an intense irritant of every tis-

sue with which it comes in contact, and, as it is a heavy gas, it settles into every little hole and depression. Also, since it was used by the Germans in explosive shells, it soon covered the ground and foliage of the battle-terrain, so that the utmost care was necessary to prevent the soldiers fighting over this ground from becoming seriously poisoned. The peculiarity of these burns was the fact that they did not appear immediately after contact, but, as a rule, only some hours afterward, increasing in severity and, eventually, if the amount of gas coming in contact with the skin and mucous membranes was sufficiently great, resulting in deep necrosis, involving extensive destruction. These skin burns were not easily prevented and were hard to treat.

One of the discoveries made late in the war was, that mustard-gas is neutralized by contact with chlorine, and various applications had been made of chlorine-carrying compounds to skin and mucous membranes for protective purposes. Dakin's solution, chlorazene (as chlorazene surgical cream) and dichloramine-T-chlorcosane. were all employed, with most excellent results, in the treatment of these burns.

One of the most interesting pieces of work in this connection was, the study made of the ocular lesions. Contact of the gas with the eyes causes an intense irritation, with degeneration of the corneal and conjunctival epithelium, and, if strong concentrations come in contact with the eye, more or less complete necrosis of the cornea, extending throughout its entire depth. Secondary infection is prone to occur, the result being a considerable destruction of tissue, which in turn frequently resulted in the impairment of vision and only too often in complete or almost complete blindness.

After trial of a variety of remedies, including boric-acid solution, colloid-silver preparations, cocaine, and the various common ophthalmic antiseptics, the investigators turned to the use of dichloramine-T in chlorcosane, which had been recommended by various writers for the treatment of infective conditions of the eye, such as trachoma. "Our experiments," they say, "showed that this solution, if applied to the eye before exposure to the gas, has a definite prophylactic action, and that, when applied before and after exposure, the resulting lesions are much less severe. In

cases in which the exposure extends over a period of several hours, the administration of dichloramine-T in chlorcosane causes, naturally, no change in the intensity of the lesion. Here, its after-use is indicated for its germicidal action and the prevention of secondary infection. It seems to us likely that instillations of dichloramine-T in chlorcosane solutions could be used as prophylactic methods on the battlefield during a known gas-attack, and that, in cases of severe eye injury caused by dichlorethyl-sulphide, its use should be continued, for the purpose of preventing secondary infection."

If the war had continued, it is probable, in view of these experiments that dichloramine-T-chlorcosane would have been generally employed by every soldier prior to "going over the top", for the purpose of protecting the eyes against mustard-gas irritation. It is also probable that either chlorazene cream or dichloramine-T-chlorcosane would have been recommended, for the same purpose, for general application to the body, as well as for the treatment of the lesions caused by this gas.

There is a principle which is a bar against all information, which is proof against all argument and which cannot fail to keep a man in everlasting ignorance, this principle is, contempt prior to examination.—Capt. Cecil Webb-Johnson.

THE VOLUNTEER MEDICAL-SERVICE CORPS

This organization, which owed its existence to the desire among those physicians that are prevented from joining the Medical-Reserve Corps, as also to the desire, on the part of the Surgeon-General of the army, to have available a complete list of all physicians upon whom he might call on for special service, has vindicated its existence splendidly in the recent epidemic of influenza. Last September, the Surgeon-General of the United States Public-Health Service, who had been charged with the national measures that were to be instituted for limiting the spread of the epidemic, requested the president of the central governing board of the Volunteer Medical-Service Corps to mobilize fifty units of the organization, each to consist of ten physicians, for emergency service in connection with the prevention of, and relief from, influenza. In response to this request, the names of the five hundred physicians asked for were

furnished within seventy-two hours. Three days after the first call, a request for another five hundred physicians issued from the Public-Health Service and, by October 1, the names of 1,135 physicians had been furnished, from among whom more than the necessary number were obtained. Since then, additional offers of service have been received and transmitted to Surgeon-General Blue for his reserve list.

In this manner, the Volunteer Medical-Service Corps promptly made good upon the first demand made upon it for assistance in an emergency and has thus justified its right of existence.

At the same time, the emergency that has arisen and was met so splendidly in the manner outlined illustrates the necessity to have attached to the United States Public-Health Service a reserve organization that can be mobilized in times of emergency.

In *Public Health Reports* for October 25, it is recorded that, with the widespread occurrence of influenza in the vicinity of Boston and the unmistakable signs of its starting elsewhere, urgent calls were addressed to the United States Public-Health Service to furnish medical and nursing relief to stricken communities. All available regular officers were detailed to the stricken communities, but, the number available for such detail was insignificant compared with the urgent need occasioned by the epidemic. Moreover, the bureau had no nurses available for service in epidemics.

In addition to his call upon the Volunteer Medical-Service Corps, the Surgeon-General issued similar requests to the Red Cross, the medical and surgical professions as a whole, and to the general public for volunteers to help combat the epidemic. At the same time, Congress was appealed to for a special appropriation to meet the expenditure requested by emergency. The necessary fund of \$1,000,000 was promptly voted and granted.

More difficult than the securing of volunteer physicians was the problem of supplying nurses, for, it was found almost impossible to discover nurses or trained assistants that were not already extremely busy in urgent medical work.

Nevertheless, a limited number of nurses and trained attendants was secured by the American Red Cross and mobilized for emergency service in the communities most

severely affected. In addition to this, the attention of local communities was called to the valuable nursing-work that could be rendered by intelligent volunteer workers, such as school-teachers, especially when they are directed by trained graduate nurses. In many communities, the organization of this group of nursing personnel has done much to relieve the serious emergency caused by the lack of trained nurses.

It was made clear from the outset that the United States Public-Health Service desired to aid, and not to supplant, State and local health-authorities in their work. Accordingly, instructions were issued that all requests for medical, nursing or other emergency aid for dealing with the epidemic should come to the United States Public-Health Service only through the State health-officer. Moreover, as soon as possible, all this epidemic-work was organized on State lines, with a representative of the United States Public-Health Service detailed to each State to secure the best-possible organization and coordination of health-activities of the service; in others, the executive of the State board of health has been given appointment in the United States Public-Health Service as field director.

While the activities of the doctors and nurses working under the Public-Health Service are generally limited to those ordinarily regarded as preventive health-measures, emergency conditions in some communities have been such that much medical relief work has had to be undertaken. This was the case, for example, in several communities where the few practicing physicians were themselves stricken and where the people were in urgent need of medical attention.

Never be satisfied with yourself! Always be discontented with your present success and strive ever for higher things.—Margaret B. Owen.

"THE MEDICAL REVIEW OF REVIEWS"

The last few years have witnessed notable changes in the medical press of this country, a number of the lesser journals having suspended publication and most of them having been absorbed by more prosperous competitors, either with or without retention of their former names. In a way, this tendency is to be applauded, since it goes without saying that an undue

number of medical journals unavoidably occasions much scattering of effort, and, consequently, the suppression of part of these multifarious publications may be looked upon as contributing to real progress.

The absorbing of other journals has been prosecuted somewhat industriously at 12 Mt. Morris Park, New York, Dr. William J. Robinson, the editor of *The Critic and Guide*, having acquired ownership in several other medical journals.

A short time ago, *The Medical Review of Reviews*, which is under the management of Doctor Robinson's son, Frederick H. Robinson, incorporated with itself *Pediatrics*, a journal that for many years had been a welcome visitor to pediatricians and general practitioners alike, because of the truly excellent work that it accomplished in medical literature and also because of its having been devoted more particularly to the diseases of children.

Now we are informed that *The Buffalo Medical Journal*, edited for several years by Dr. A. L. Benedict (well known to CLINIC readers) also has been taken over by *The Medical Review of Reviews*, and lastly, that the latter journal has purchased, for consideration, *The Southern Practitioner*.

The Medical Review of Reviews has experienced a marked revival since its destinies have been guided by Mr. Robinson. Not only are its editorial pages characterized by much erudition and brilliancy of thought, but, the original contributions also present communications of lasting value, while the abstracts from current medical literature presented to its readers show care and thought in their selection. *The Medical Review of Reviews* is one of those journals that are worth while. In its enlarged form, including, as it does, several well-known and excellent other journals, it bids fair to surpass even itself, if that be possible. We wish our contemporary every success in its enlarged sphere of activity and hope that it may continue its good work for the benefit of the medical profession for many years to come.

Nihilists and destructive critics have done much to lower medicine in the estimation of the people.

IN PROSPECT AND IN RETROSPECT

The other day, sitting in a restaurant, I overheard a man behind me say: "Twenty years is a long time to look ahead—to look

back it is like the flash of an eye." This saying, trite as it is and camouflaged with the hoariness of age, arrogates to itself a degree of truth that would be astounding if it were justified. As a matter of fact, like most commonplace sayings that fall so glibly from the tongues of certain wise-acres, it is an old chestnut and, like most old chestnuts, it harbors within it an element of untruth that deserves to be nailed down.

Twenty years is a long time to look ahead; most true. Don't we all remember the time when as kiddies we teased Dad and Mother about how soon we should be grown up? At the age of six or seven years, twenty-six means the mature age of accomplished manhood and womanhood; while we who have turned the milestone of the half century look back to that period of all-inclusive and overpowering wisdom smilingly, half sorry for the Oh! so long, long ago. We look back twenty years, we look back ten, five, two years, or even a twelve-months and see what all has happened in those long toilsome days, in those stretches of weary nights of which we yet think as long since gone and done with. One year ago, even; three hundred and sixty-five days and three hundred and sixty-five nights. It is a lifetime full of intense feelings and rich experiences. It is a succession of ages not only to look forward to, but to look back upon, for those who are not fortunate enough to be blessed with some absorbing occupation but who dally and idle their lives away or for those who through some misfortune or on account of some misdeed are obliged to pass their days in confinement or, at any rate, away from congenial surroundings.

Occasionally we may meet some invalid who has lain on his bed of suffering for ten, fifteen, twenty years. Ask him, or her, whether they can look back upon their life in the flash of an eye. Every day was and endless torture, every night an eon of suffering. And, they all have left their indelible mark and will never be forgotten.

Ask the man who has been freed after twenty years of confinement in prison whether he can look back upon this time as in the flash of an eye, he will tell you that he lived countless long, tedious lives in those twenty years, lives full of weariness and discouragement and despair that

stretch out in retrospect without a limit to the beginning of time. Ask the factory worker who is "an old employe" whether the twenty years that he spent behind his bench or in the shop seem short to him now, and he will tell you that they represent an interminable series of grinding days and toil-stunned nights. Ask the traveler or globe trotter who has spent the best years of life exploring the recesses of the earth, the pinnacles of mountains, the courses of streams and rivers, whether his experiences return to his eye kaleidoscopically, rapidly, swiftly, not, perhaps, like the flash of the eye, but, like the screen in the moving picture, let us say: and he will think back for hours and days, mayhap, over the experiences that have come to him in those twenty cycles of the earth around the sun, with their long laborious days of marching or climbing or riding and interminable nights of watching and possibly fighting; twenty years of work and effort. Ask the ordinary citizen, the business man or the professional man whether he looks back upon the last twenty years of his experience like the flash of an eye, and he will tell you that to him they represent a continued series of difficult problems which he lives over during minutes or hours but which, nevertheless, seem long drawn out and endless even in memory.

No, No, these old sayings that are scattered so freely beneath the branching chestnut tree are misleading and false. Twenty years is a long period to look back upon, just as it is illimitable in prospect.

But, let us look backward and forward for just one short year. One year ago, to be personal, we started upon the twenty-fifth year of our experience as a medical journal. We were rather proud of the fact and strutted a little. Can you blame us? From what you, the readers of CLINICAL MEDICINE, have told us and are telling us constantly, we have succeeded in our aim to present to medical practitioners a journal which helps them in their daily tasks, in their constant effort to alleviate disease and suffering. We infer that we have been successful in making the lessons that we attempt to teach free from dryness and monotony. It has been our pride to have CLINICAL MEDICINE "human." We have everlastingly been endeavoring to get under your skin, talking to you as man to

man, mindful of the fact that your patients are not "cases" but human beings who want to be treated, not by the rule of three, but, as creatures with sensibilities and feelings whose inner workings have become disarranged and whose mentality therefore has suffered even though possibly no mental affliction existed.

So, we were just a little proud of what we had accomplished at the beginning of the last year that should make the first quarter-century of our existence. In this last year we have visited you twelve times, sending you our messages, following the progress of the world war in so far as it as of interest particularly to physicians, taking note of many important lessons learned and passed on by our colleagues in field and in camp, and we have greeted with loud acclaim, like everybody else, the cessation of hostilities and expressed our sincere hope that this would end the war and would initiate a long period of peace on earth; while at the same time we expressed and acted upon our intention to do our share as far as lay in us toward the restoration of all that is disorganized and that requires reconstruction, during this perhaps the most important and serious period that civilized mankind ever has passed through.

It was a long time, these twelve months, these three hundred and sixty-five days; a long and weary period to look back upon, lightened, though, by the joy of the last two months since the signing of the armistice which brought renewed courage and joy to many hearts.

And, so, we look forward to one year, believing it best to accomplish our tasks one at a time, holding it to be wiser to plan definitely for one year ahead, since it is just the immediate present that is ours, while the remote future is in the lap of the gods. What will the coming year bring? We do not know. We hope to continue making CLINICAL MEDICINE just what it should be for your benefit. We hope to help you in your daily tasks and problems; we hope to inform you of new discoveries that are being made, of new things that are observed, and we hope to be permitted to share in the restoration of the world as far as may lay within our sphere. So we look ahead to twelve numbers of CLINICAL MEDICINE which will comprise the first volume of the second

EDITORIAL DEPARTMENT

quarter-century of our existence. It is a long time to look forward to. There will be work, there will be study, there will be pleasant experiences and there will be discouragements; but, with it all, the lesson is impressed upon us to take each day the work that is for us to do and do it as well as we can, putting forth our best efforts and leaving the result to that Beneficent Law that works out to its own wise ends all happenings and all acts of mortals.

There existed, at one time, a very beautiful custom in Germany, which it would be well to imitate everywhere. On the first day of the New Year, whatever may have been the quarrels or estrangement between friends and relatives, mutual visits were interchanged, kindly greetings given and received—all was forgotten and forgiven. Let this custom begin with reconciliation to God, then friendship and fellowship may be found that shall be blessed and lasting.—Foster.

OUR HONOR ROLL

On pages 60 and 61 on this issue, we publish a list of the representatives of The Abbott Laboratories, the Slee Laboratories and THE AMERICAN JOURNAL OF CLINICAL MEDICINE who have served our country in the Army and Navy during the great war. We also reproduce their pictures as far as we are able to do so.

Needless to say, the men whose names appear in the Roll of Honor are not the only representatives of the three institutions concerned who "served their country." Never before has any war been so much a people's war and never before has the whole nation, men, women and children, participated so wholeheartedly in promoting the cause for which the government had found it necessary to declare war. Therefore, we stay-at-homes whose names do not appear on the roster, nevertheless,

may feel that we also have served our country. Of our own editorial staff, Dr. Alfred S. Burdick served constantly and efficiently as a member of Draft Board, Exemption District No. 59, while Dr. H. J. Achard served with the other medical examiners on this board. He also spent much time as medical attendant to the dependent families of soldiers and sailors. A large amount of clerical work connected with draft-board and other patriotic activities was accomplished in the offices of CLINICAL MEDICINE, many of the young ladies gladly donating their evenings and Saturday afternoons to this work. However, we sent those who were available forth to wear Uncle Sam's uniform in the battlefields, in camp, and in other phases of active service.

The names of these fortunate ones, as their pictures appear in the page facing the Roll of Honor, are as follows:

1. Al. Stiles.
2. Raymond Ranson.
3. Chester E. Brush.
4. A. A. Leibold, D. V. S.
5. A. G. Brown.
6. Ewart L. Shattuck.
7. George E. Burdick, M. D.
8. Arthur Miller.
10. Elwyn S. Mcyers.
13. F. N. Cooper.
14. G. Gustafson.
16. H. P. Jones.
17. C. S. Curtis.
18. Arnett Selig.
20. Valentine Ferrekes.
21. S. Dewitt Clough.
23. Richard Slee, M. D.
24. Arthur M. Slee.
25. Chas. J. Moss.
26. Roy E. Thumberg.
27. C. M. Hotchkiss.
28. R. W. Dewar.
31. Karl H. Hall, M. D.



Leading Articles

Food Economics

By A. L. BENEDICT, A. M., M. D., Capt. M. C., U. S. Army, Buffalo, New York

EDITORIAL COMMENT: The coming of peace and the period of reconstruction involves many problems for the solution of ourselves, our Allies, and our late enemies alike. Among these, one of the most important is that of food economics. Doctor Benedict presents in outline some of the salient points on the subject that may well be studied carefully by physicians.

IN war, the relation of price to physiologic and esthetics value, adulterations, even, within certain limits, wholesomeness are subordinated to the prime necessity of having an ample supply of the best standard foods for the army. Extravagance may be allowable and even encouraged, in order to conserve staple foods; and, while prices may be directly or indirectly controlled by the government, contrary to peace precedent, the aim may be to discourage civilian use of certain food stuffs as well as to protect the people against profiteering.

With the advent of peace, there begins a transition-period toward the restoration of ordinary economic rules, although the continued necessity of providing foods for other nations and the varying conditions of available stocks of different foods and of facilities for transportation will require adherence to war regulations for some time to come; and these regulations may appear inconsistent because of the policy to apply them only according to the actual conditions obtaining for any particular food-stuff at any particular time and place.

The ultimate principles of food economics are the same as for any other commodity, and they can not be sublimated beyond the prosaic demand of the ultimate purchaser to get the best value, for his labor, with due regard both to physiologic and esthetic standards. Nor can we get away from the hard fact that values have been measured for many centuries in terms of gold or other forms of money ultimately based upon the ease or difficulty of procuring gold. Consequently, we must dismiss

the former pretense of indifference with regard to price and the various other affectations that have been applied to food even more than to dress and other personal necessities and to domestic, as contrasted with commercial transactions.

The Economic Crime of Wasting

The affectation of liberality in serving, of daintiness in eating, the reduction of such policies to an actual rule of etiquette that the plate should never be entirely cleared, overrefinement of the proper objection to the re-use of broken food, laziness in domestic conservation, lack of insistence upon the same care to avoid waste by domestic servants as by employees in factories, all this has resulted in an average waste of at least 10 percent for the entire country, and up to 50 percent in the case of many families.

It is not a joke to say that, hitherto, we have all too literally been following the mental process of the garbage-man and have judged the social status of ourselves and our neighbors by the "elegance of the swill". In military cantonments, there was, at first, an enormous waste of food; which, however, was systematically combated. As extreme examples may be mentioned: a large canful of wheat bread thrown out by a single company and the reduction of the waste for one day for a unit to slightly larger than 5 ounces.

Fallacious Household Economies

Fallacies about preventing waste should not be neglected. So-considered cheap foods often are dear at any price, except as appetizers, because of their small content

of nutriment—the commonly used vegetables popularly considered hearty and sustaining being for the most part nothing but cellulose and water and useless, in the limited sense, for nutrition. Cheap meats, as a rule, are expensive relatively to their net nutriment, while, even if tables show a high caloric value, this usually is due to fat, which could be more economically purchased than at meat prices and which many persons can not or will not eat.

Small-scale domestic methods of economy, by making fats into soap, ordinarily are absurdly costly in labor, fuel and materials. There is an unavoidable waste of about 25 percent in the "peelings" of all fruits and vegetables, and this waste may be greatly increased by careless methods. However, an order to avoid this waste by serving potatoes et cetera in the skins, may defeat its object if they are dumped into gravy or vegetable juice on plates, so that the individual simply squeezes or cuts out as much of the interior as is convenient without too much soiling of the fingers. Bread puddings and various similar desserts are, by many persons, considered adequate only when the bread or other cereal remnant is diluted and concealed with costly material, thus rendering it undetectable. Many analogous fallacies occur in vain efforts to prevent waste, instead of following the simple principle of buying, cooking, and serving only what is to be actually used and of utilizing the inevitable excess in simple and direct ways.

Utilization of Unavoidable Food Waste

Generally speaking, the utilization of unavoidable food waste, including that which is practically inedible or even inimutritious for human beings, is best accomplished by feeding it to pigs. Rendering into fat and fertilizer is less economic, but, often, better, for practical purposes, by municipalities, while questions of expense, of transportation, labor, availability of market, et cetera, often necessitate destruction, while sometimes, by mixing it with other waste, some fuel-value can be derived. The marked diminution of incinerators at cantonments, in the course of the last year, represents not only a tremendous saving by the utilization of garbage, but, in fuel, labor, and damage from smoke.

Application of Ordinary Economic Principles to Food

There are obvious reasons why wholesale prices should be lower than retail

prices, why incidental expenses for transportation, bookkeeping, overhead charges, labor, et cetera, should be added to the price of various commodities, why the transient and especially the nonresident customer should pay a higher price than the regular, resident patron. Still, there is no reason why these factors should apply to food and a few other services to a greater intrinsic degree than to any other commercial transactions. It is doubtful whether a meal can be served, under conditions as ordinarily demanded, for less than a 100-percent gross profit on the cost of the raw food; however, there is no reason why the purchase of food by the meal, wherever one happens to be, should exceed by 500 to 1000 percent the cost of similar food and similar accessories at home.

Furthermore, the labor of serving food, even that particular form of labor which carries the food from the kitchen to the table, should be adequately paid; there is no good reason, though, for paying for it twice over, and at rates far beyond its true value, in the form of a gratuity that debases the laborer. Of course, we dislike to break an established custom, especially as it involves much personal discomfort. We are, moreover, indifferent to the fact that the custom has exerted such a serious influence that it is accepted legal precedent that a waiter has not the status of a witness or juror of average vocation. Indeed, we affect not to realize that, in the aggregate, the tip, in itself, is a serious factor against the same convenient use of readymade foods, to borrow an expression from another trade, that under similar conditions is applied to most other commodities.

The Stabilizing of Food Prices

Statistics show that the dollar of 1918 had a purchasing power of 59 cents as compared with that of 1914. Experience seldom shows that the individual enjoyed only 59 per cent of the standards of comfort of the year 1914 on the same total outlay or that his expenses increased to 169 per cent in securing the same standards as prevailed in 1914. It is doubtful, whether, in the whole, the difference amounted to 10 per cent.

The discrepancy is accounted for by two well-known economic principles that should have accompanied the statistics, namely:

1. Most commodities, including food-stuffs to a considerable degree, can be

carried over for considerable periods to cover seasons of high price.

2. To serve any particular need, a cheaper substitute can usually be found in an emergency or even by choice, without its being materially inferior.

In ancient and medieval times, governments regularly prepared for war and against failure of crops by carrying large stocks of grain and other commodities. The same course would be practicable today. To a considerable degree, this would protect the consumer against necessary or speculative increase of price and the producer against the loss from a temporary glut of the market, while the whole country would gain, almost every season, the enormous waste of individual foodstuffs left to rot on the ground because the market-price did not sufficiently pay for the labor of collection. The statement that such a scheme would be practicable is based upon known facts as to the keeping-properties of various foodstuffs, under refrigeration, after desiccation or for grains and cereal flours generally, or merely under ordinary care against the effects of the weather. The necessary methods are, indeed, already in operation (merely as business procedures for securing private profit) on a sufficiently large scale to insure their practicability on a greater scale.

As to Governmental Control or Ownership

Popular sentiment has been educated, especially by war-policies, to accept the general proposition that food is as necessary a public utility as are transportation or civil or military protection. Intelligent supervision of production, transportation, and dealing in foods should be continued. The wanton wholesale destruction or waste of foods, for the purpose of maintaining high prices, should be dealt with in accordance with the fact that food represents life. And the same principle should apply to all forms of artificial manipulation of prices wherever it exists.

It is difficult to get rid of the preconceived idea that concentration of industry of any kind and management on a large scale should result in economy and low prices. In some few lines, this idea has worked out in practice, yet, we find almost always that the cost of living rises as cities become larger and the milk industry, other dairy industries, meat industry, and cooperative-farming movements have, as a rule, resulted in increased prices, just as the mod-

ern laundry has increased the cost of cleanliness.

How far the explanation rests with the demands of organized executives and trained business men, and of the subsequent and logical demands of organized as opposed to disorganized individual labor, and how far the increase in ultimate cost might be avoided by proper governmental control, is an open question.

It must be conceded that, in general, meat, milk, and other foods handled by large corporations are of better quality than formerly; also, that the prices have been increased by general factors applying to all industries and ultimately resting upon the fact that the real unit of value is labor, and that, if labor is rated higher in dollars and cents, money will have a lower purchasing power, exactly in analogy to the fact that, if gold goes above the par value of currency, the latter will become debased.

Another serious fallacy that applies to foods is the "producer to consumer" theory. In plain words, the fruit-raiser, the market-gardener or the chicken- and egg-raisers has done precisely what the manufacturer has done: kept most of the jobber's and retailer's profit for himself. If anything, the producers of food have gone further than have the manufacturers in expecting the direct purchaser to take the whole burden of transportation and to pay an excess price, on the ground that the foods are fresh—ignoring that the purchaser is the one who eliminated the necessary or accidental delays of transit—or of superior quality, which may or may not be a fact. The general experience in regard to the expected influence of good roads and automobiles is, that they have increased the cost of foods and have demonstrated the practical necessity of a properly conducted and reasonably simple system of middlemen.

Questions of Supply and Demand

Too much should not be expected of the law of supply and demand. Demand is by far the stronger element, and the demand of the man whose business it is to produce or to deal in a special article or class of articles is far stronger than that of the ultimate consumer distributed among a large number of producers and dealers, each of whom represents only a small portion of his particular aggregate expenses. An excessive supply temporarily decreases prices, but, ultimately discourages produc-

tion and rapidly tends toward an equilibrium. Thus, for example, about twenty years ago, there was a tremendous crop of potatoes, so that the retail price in cities fell to 25 cents a bushel. Most farmers, having received less for their large crop than for a small one, became discouraged. A few, however, planted potatoes for the next year and realized on them a large profit.

On the other hand, a demand in excess of supply, while temporarily increasing prices, tends, if it is steady and reliable, to increase production, so that prices fall. Thus, when oranges were beginning to be sold at prices so low that one was amused at Goethe's having thought it worth while to write a poem to accompany a gift of two oranges, it used to be said, jokingly, that oranges might some day become cheaper than apples. The crossing of the price-curves of these two fruits has logically occurred, in accordance with the law of supply and demand, although in an exactly opposite way from the usual conception.

The facility with which businesses may be changed or modified is one reason why fluctuations of supply and demand will not permanently alter prices beyond the limits of willingness of producer to sell or of the purchaser to buy. This applies especially to the supply of milk and its derivatives. It would be very sensible for healthy adults to drop the use of milk as a beverage, and it would appear that the price of the milk for infants, invalids, and the necessary domestic uses would thus be restored to the former normal standard. But, the distributing forces could be easily demobilized, centers of municipal distribution would divert the milk to the manufacture of ice-cream, buttermilk, butter, butter substitutes that are using part milk or cream; or, if these centers were not willing to pay the original price to the producer, shipping-centers would be converted into creameries or else the dairy farmers would convert milch-cattle into meat or sell the animals into more remote parts of the country where the hilly nature of the ground makes ordinary crop-farming unprofitable, but, where cheese-factories exist or could easily be established. Meanwhile, the original dairy-farms would be available for market-gardening, sanitariums, golf-clubs or suburban real-estate tracts.

It is not the intention to prophesy that exactly this course would be followed or

that exactly the same processes of demobilization would occur about each municipal center, but, merely to indicate that the various steps of milk production, conversion into other dairy products, and delivery are liable to rapid adjustment according to fluctuations in demand for any particular milk product or for milk in general, so that the law of supply and demand would result only temporarily, at most, in a reduction of price.

Practical Application of Economics

The law of supply and demand is, to a certain degree, amenable to the interests of the ultimate consumer, if he understands and follows its details practically and promptly, largely with regard to the principle of the use of substitutes. For example, the various mammalian meats are, for practical purposes, interchangeable, analogous cuts having nearly the same nutritive values. One who buys at any period or day whatever meat occurs to him as a choice, without regard to price, especially by telephone, will, in the long run, pay about 50 percent more for the same quality, quantity, and variety than one who selects from day to day whatever meat is cheapest and who avoids, for periods of several weeks, any particular kind that happens to be beneath the normal production. Such a course not only reduces individual expenses, but, automatically tends to secure a general maintenance of a price fair alike to producer and consumer. Approximately owing to differences of composition, and especially of waste, the actual *quid pro quo* is the same when the price, per pound, of lean mammalian meat equals that of a dozen of eggs, it is double that of poultry per pound, and quadruple that of small fish per pound. In this connection, the fallacy of general strikes against high price for any given foodstuff is easily seen. A few years ago, a general meat-strike was called. This gave ample warning all along the line to slow up supplies. Fish were largely used as a meat substitute, at an apparent saving of 50 percent by weight, but, at an actual doubling of the cost of the nutrient furnished. The fisheries profited, retailers were embarrassed only by transient losses and the necessity of slight change in wholesale marketing. Meantime the popular appetite for real meat was whetted and the ultimate demand for meat at the original price prevented

any loss by the meat-industries, except for the transient slacking of business.

A general, continuous policy of selective buying according to real food values would produce the desired result, up to the point at which the demands of the successive producers and dealers would remain firm—namely, at the average profits or wages demanded for comparable industries in general.

Here may be mentioned another economic principle the neglect of which probably operates to decrease the value of the purchase of food, in proportion to expenditure, more than of any other commodity. Many persons assume that certain articles are inevitably and permanently luxuries, and beyond the means of the average. Thus, in the meat-strikes already mentioned, the great majority of purchasers bought small fish at, say, 10 cents a pound, believing that the larger and better fish at 20 cents were luxuries, even though, with reference to the net nutrient, the latter actually were cheaper. In inland communities, there is quite a general belief that salt-water fish are expensive luxuries, whereas, owing to the greater average size and proportionately less waste, they often, if not usually, are more economic than fish from nearby sweet waters.

The idea of many housewives as to the expensiveness of olive-oil is so firmly es-

tablished that they often fail to realize that "a pint is a pound" and that olive-oil often is less costly than butter. This idea is closely associated with the implicit belief that everyday foodstuffs are hearty and nutritious and that more or less modern, fancy preparations are the reverse. Most vegetables that are not seeds or starchy accumulations in tubers and roots are weak in nutritives, while almost any culinary preparation containing sugar or oil is highly nutritious. Aside from meat, eggs, and other animal products, which are, probably, inevitably of relatively high cost, and which need be used only to secure about 25 Grams of animal proteid a day; and bread, which, on the other hand, is, one of the cheapest and most nourishing foods, especially in regard to proteid, it is generally true that the socalled plain, hearty foods are far more expensive, in proportion to nutrients, than are fancy courses, including most dessert-dishes.

Some of the economic principles of dietetics are as self-evident as they are popularly misconceived. Thus, no one will dispute the fact that the mass of similar solids varies as the cube of similar diameters. But, suppose it comes to the choice of 2-inch oranges at 20 cents a dozen and 4-inch oranges a 60, how many realize that if the former price is reasonable, the larger ones represent a saving of one dollar?

Camouflage

Artificially Induced Skin Diseases

By B. SHERWOOD-DUNN, M. D., Paris, France

Corresponding Member, Société Obstétrique et Gynécologique de Paris; Surgeon (Colonel), Service de Santé Militaire de Paris; Physician to Cochin Hospital, Paris.

THE title selected for this paper may strike the reader as a little bizarre, still, it seems to me to be particularly appropriate to the subject about which I purpose to write. It is not new for the men drafted into military service to induce or to simulate some disease (before or after being called), in hope of securing exemption. Since the beginning of the present war, we have seen multiplied the number of those who have feigned illness of every description, as well as many that have mutilated themselves in order to escape military serv-

ice. It is these fraudulent conditions that will be discussed more in detail.

In the venereal and dermatological clinics, a great majority of these camouflage patients were suffering from picric icterus, petroleum abscess or other provoked eruptions, while many had induced blenorrhagia. However, it is only just to say that, although the number of those thus trying to avoid doing their duty is large, it is insignificant when compared with the number actually at the front, and they are composed chiefly of the class called the submerged

tenth and who are devoid both of courage and of honor.

In the army itself, there are two opposite causes that give rise to induced disorders. First, in the tranquil sections of the front line, where there is no fighting or excitement, the soldier provokes an eruption so as to escape the deadly monotony of trench-life. Second, in the section that has not been free from fighting night or day for many days, and where the determination of both sides to win causes death to stalk up and down the line without a moment of repose.

Milian¹ relates the case of a lieutenant, twice wounded, twice decorated, many times



Fig. 1. Pustulous Dermatitis produced by Thapsia (Milian).

cited in regimental orders for bravery and dash; No. 1, in his battalion for promotion, who arrived at the base hospital with a provoked eruption. It was at the time when the Huns were battling for the Vaux fort in front of Verdun. The lieutenant's battalion was to take the chief line of defense the next day. "It was almost certain death and I was afraid," he said. And this same man when once in action was a stranger to fear. The apprehension of certain danger is more terrible to support than the danger

itself. Thus, we must take into consideration for this man and for all like him the extenuating circumstances that are active at the moment.

There are numerous kinds of eruptions that can be artificially provoked, the leading ones being as follows, their frequency being in the order of their enumeration: Pustulous dermatitis, bullous or phlyctenular eruptions, eczematiform dermatitis, edemas, false leg-ulcers, false mucous plaques, provoked blenorragia.

Pustulous Dermatitis

This is one of the most frequent skin troubles presented and one of the most characteristic. The elementary lesion in this form of provoked dermatitis is a pustule, that is to say, a little dermic elevation of the size of a pinhead and containing pus.

This pustule, if examined attentively, will be found to be reposing upon healthy tissue; and, this characteristic is important. There may be a border of inflammation surrounding it. These pustules are, as a rule, in close juxtaposition and abundant. The next important point to be observed is, that they are in the form of isolated plaques, usually two or three in number and, as a rule, all in the same neighborhood; but, even if located at different spots on the body, there always is the marked characteristic of localization. There is no diffusion nor any sign of a general character significant of constitutional disturbance.

As a rule, these pustules are found upon the face and in the beard; sometimes the ears are invaded, either the pavillon or the cranoauricular angle. Often the thighs are the seat of eruption, usually at the side and to the front, where they are most readily reached by the right hand. For the same reason, often the fore part of the left arm may be involved anywhere from the shoulder to the wrist. One of the most important points in the diagnosis is, to observe that the pustules are all of the same age, that is to say, they all present about the same degree of evolution. If the patient presents himself in the early stage, it will be seen that the pustules all develop together and coordinately; if later, they all are in the same stage of desiccation. This characteristic of the eruption, so useful in point of diagnosis, is easily explained. When the patient applied the irritating substance, he waited to see the effect, without renewing it, doubting in some measure whether it

¹Milan Press Médicale, May 5, 1917.

would be effective: surprised, often, at the number and marked effect of the application in producing a violent eruption, he makes no further application in the same place and presents himself before the examining surgeon.

The difference is marked between this form of eruption and that of the ordinary local infection—the pyodermatic or follicular. With these, each day, there appear one or more new pustules at points distant from each other, as, on the cheek and chin, to the right and to the left, and while one subsides another appears. It is by this manner of appearing that we recognize the etiological causative agent (Fig. 1.)

If a second eruption breaks out at the close or during the treatment of an existing collection, it appears suddenly, usually in the morning and in a new location. However, it is always sudden, simultaneous, circumscribed, not showing a progressive evolution of successive pustules as they appear in spontaneous disease.

Two substances are in vogue for producing these skin eruptions—croton-oil and thapsia. The croton-oil causes a pustulous eruption that is more infiltrated and exhibits a more severe inflammatory base than does thapsia. The soldier soaks a tampon of cloth or cotton with the fluid, and with it rubs the oil into the creases of the face or pavillon of the ear. Thapsia ordinarily being found as a plaster or salve, it does not so readily lend itself to introduction into the cracks and crevices, so that the results of its employment are more noticeable upon the cheek-bones and prominent points of the surface affected.

The diagnosis of a provoked pustulous dermatitis generally is easy, if one remembers these marked characteristics: patches of pustules, clean and sharply localized; situated, as a rule, in regions accessible to the right hand; identical age of the pustules and the appearance of new pustules always sudden, simultaneous, and in distinct patches.

As compared with these, the pyoderma-titis, the nontrichophytic sycosis, and the impetigo are easily differentiated.

Bullous or Phlyctenular Eruptions

The vesicular eruptions are not so frequent, and they are more difficult to account for and more readily recognized. The patient rarely presents himself during the period of vesication; he waits for the blis-

ter to dry and then aggravates the condition by various forms of irritation until an ulcer is formed. When he appears early, he presents a phlyctena, rounded or rectangular in shape, that has the appearance of a burn of the second degree; but, he denies having been burned, as that is difficult to prove, and he says, usually, that it came all of a sudden and that he is ignorant of the cause.

The Bullous Dermatitis

These cases also are rarely seen in the early stage of vesication. One patient came into the hospital, having about forty well-defined bullæ of the size of a pea or bean, and all confined to one leg. (Fig. 2.) They resembled pemphigus, but, were found upon healthy skin and without any characteristic peripheral inflammatory zones. They could not be true pemphigus, for the reason that one does not find the evidence of this disease confined to a well-localized part of the



Fig. 2. Bullous Dermatitis provoked by a Vesicant (Milian).

body; moreover, fever or any constitutional symptoms were absent, and the vesicles were all of the same age. These signs must arouse the surgeon's suspicion and enquiry; all doubt usually being dissipated by the fact that under an occlusive humid dressing these lesions are rapidly cured in three or four days.

These vesicular eruptions are most commonly caused by the application of cantharides in some form, whereupon the subject irritates the base of the vesicle by renewed application, and thus provokes a morbid ulcerous condition. Here, the diagnosis is more difficult.

The bullous dermatitis of streptococcic origin may be confounded with the provoked eruptions; but, there is present an element that at once marks the difference between the two. In the provoked vesicular

eruption, the center of the vesicle is dome-shaped and the vesicles are distinct and separate. In the streptococcal variety, the center of the affected part is without vesicles and is rough and red, while more or less continuous around the border there appears an elevated ridge, which marks the slow rate of extension of the infection. (Fig. 3.)

Eczematiform Dermatitis

The face is a favorite site for this form of eruption, with the eyelids frequently in-

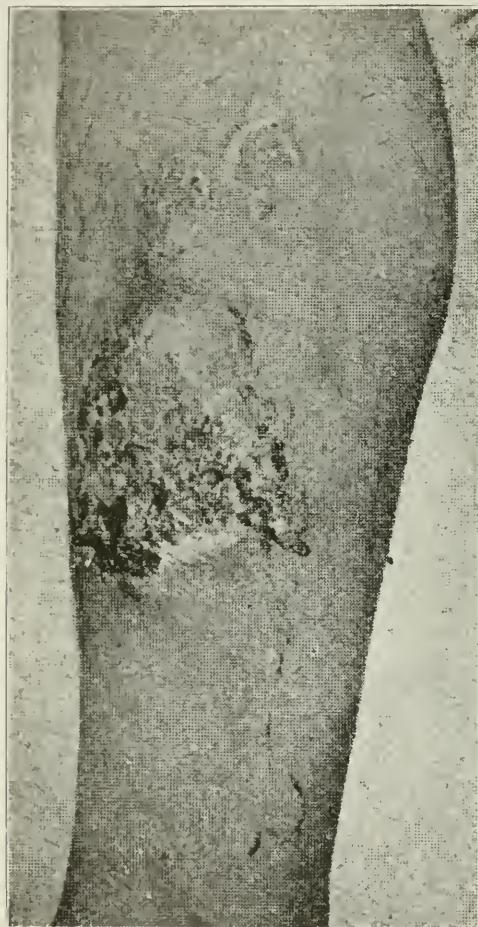


Fig. 3. Phlyctenular Dermatitis (Milian).

volved; also the forearms, the hips, and the groins. It may be characterized as edematous erysipeloid dermatitis; the skin is red and edematous, and, when found upon the face, the eyelids often are puffed and swollen, so as almost to close the eyes. It is not infrequent that soldiers thus affected are

sent to the hospital with a diagnosis of erysipelas of the face; but, the absence of a chill or fever, the general condition of the patient and absence of swollen glands (inguinal or submaxillary) at once brings the subject under suspicion. The surface involved bleeds readily, resembling acute eczema. One of these patients was evacuated at Troyon with a diagnosis of erysipelas, and, in another base hospital, at Ambly, as having eczema.

The rapid evolution of the condition is significant. In from two to four days, the eruption has fully declared itself and in from four to six it is completely healed, once the patient is hospitalized. With the disappearance of the eruption, the skin tends at once to return to a normal state; this being quite contrary to the spongy, furfuraceous desquamation, glistening surface, and tender condition that follows eczema. Still, despite all this, the condition is difficult to diagnose. If it is possible to eliminate erysipelas, it is less easy to exclude eczema.

When one is convinced that the condition is the result of some irritating agent, the nature of it can be determined only by the confession of the patient—and here comes an important point. In case of simulation, the patient will persistently deny all knowledge, hiding carefully the agent employed; whereas, if it was accidental and not purposely provoked, it is possible to discover that some lotion or hair-dye or a sublimate solution made use of by the subject as a cosmetic or therapeutic preparation is the causative agent.

This form of eczematous dermatitis is rare, because it is not easily produced, and requires a certain skin susceptibility to produce artificially. The only agent I know of that can produce the condition is automobile-essence (gasolin), which it is not difficult for a soldier to procure. So far I do not know of a single instance where a confession has been secured as to the agent and manner in which the eruption was brought about.

Edemas

Certain of the simpleminded men tie a band about the lower extremity of the arm at night, tight enough to impede the circulation, but, not so tight as to be unbearable. In the morning, the members presents a white and swollen aspect, quite edematous; but, it is at once recognized by the sharp

mark around the arm or leg where the constriction was made.

False Leg Ulcers

Simulations of ulcer are more likely to deceive than any other form of induced disease, for the reason that there is nothing about the lesion to mark it as being self-induced.

The following is an ordinary case. A soldier is brought to the hospital with a bandaged leg and which has been treated at one of the first-line stations. He relates that he fell and skinned his shin or was wounded by a grenade, or had a blind boil, or anything that would leave a wounded surface, and that this had been treated for two or three weeks without being cured. For the time, the unsuspecting surgeon accepts the explanation. He sees one or more rounded ulcers, often profound, varying in size from a 10-cent coin to that of a silver dollar that, from their simple appearance and sharply defined extent, with proper applications and dressings may be expected to heal promptly.

Time passes, the regular dressings are carefully made, but, the sores do not show the slightest tendency toward a cure. After three weeks, they are in practically the same state as at the date of entrance, sometimes somewhat enlarged, some new abrasions may appear, until at last these sores, that have resisted treatment for six weeks, arrest the attention. The doctor no longer can refer their cause to traumatism and he begins to review the various conditions that could give rise to the existing state, thinking, mayhap, of varicose ulcer and syphilis. He redoubles the minutia of his treatment, uses antiseptics in abundance, et cetera, but, the result is the same; weeks and months pass, yet, the patient still is there.

It can be set down, as a rule, that the majority of leg-sores resulting from traumatism, if they do not respond to ordinary hospital treatment and persist for three months, are induced and artificially kept active.

These provoked ulcers are, generally, round and very regular in contour, simulating in a marked degree the gummas of syphilis. They will have a depth of 4 to 5 millimeters, with borders sharp-cut and slightly elevated, the base bright-red and inflamed; there is absence of the filiform amorphous breaking-down of material accompanying infection and absence of infil-

tration; but, from time to time, one finds clinging to the dressing an eczematiform liquid, the result of the irritating agent that has been employed. (Fig. 4.) The suppuration, as a rule, is abundant, thick, and of a greenish-yellow color.

The ulcers are almost always situated at a point easily accessible to the right hand; the inferior third of the right tibia, outer surface of the left leg, and inner surface of the superior third of the right leg. In one case reported, it was the inner surface



Fig. 4. Ulcers produced on the Calf of the Leg (Milian).

of the left arm. They never appear at the classic point for varicose ulcer, just above the malleolus, a point of which the ordinary soldier of the kind with whom we have to deal, is ignorant; but, are higher up, where more readily reached. It is rare that the subject does not cause more than one sore to appear, the rule being two or three, or even four, and, mark! all appearing at the same time.

A characteristic point in the diagnosis is, that these sores are evolved very slowly. In spite of the various applications and rest in bed, besides the perfectly healthy appearance of the surrounding parts, they show not the slightest sign of a varicose condition; they gradually deepen, but, they rarely enlarge.

Sometimes a new point will be started, and then, if the doctor is alert, he will find some very significant signs. The new ulcer starts in one of two forms, either as a vesicle, as the result of the application of some vesicant, or as a discolored gangrenous-looking spot, the result of a caustic application, such as caustic potassa. In the presence of a newly forming spot presenting either of these characteristics, every hypothesis of syphilis, to which may have been attributed the trouble, is nullified; for,

never has an ulcerous gumma started as a vesicle or an escar.

The Differential Diagnosis

The diagnosis of provoked ulcers of this character is extremely difficult, unless one can witness it in its first stages, seeing it start as a vesicle or an escar.

The differentiation from an ulcerated syphilitic gumma is rendered extremely difficult when the patient gives a history of previous syphilitic manifestations and, because of his acquaintance with the characteristic shape and appearance of the gummous syphilide, he causes his provoked ulcer to appear as like that as possible. Milian relates a case sent to him at the base hospital, with a diagnosis of syphilitic gumma, in which the characteristic appearance of the ulcers substantiated the same. This diagnosis was accepted and the patient put under treatment with neosalvarsan in progressive doses, starting with 0.45 Gram and gradually increase amount to 0.9 Gram. However, the ulcer remained the same, the treatment produced no effect. The ineffectiveness of the medication and the appearance of a new ulcer starting with a vesicle opened the surgeon's eyes, for, never has a syphilide commenced with a vesicle.

The antisyphilitic treatment with arsenic is an excellent diagnostic expedient. The skin- and the mucous lesions of syphilis so readily and rapidly yield to this remedy that the persistence of suspected ulcer, in face of an intensive course of treatment, always is significant.

The Wassermann test is of uncertain value in these cases and often disappointing. With a syphilitic history of the patient, the test will vary, but, it is only rarely that it does not show negative at the close of an arsenical cure. However, the Wassermann test is of decided value when negative in presence of what is supposed to be an ulcerated gumma, for, rarely, if ever, will the test be other than positive when the ulcer is a syphilide.

The provoked ulcer is readily differentiated from the chronic ulcer of ecthyma. The latter starts with a swelling and elevation to a point or apex, which becomes pustulous. When established, it shows a fungoid base of infiltration, with mamelon eminences. The *entire denuded* surface is covered with these vegetations, which are characteristic. Moreover, they become covered with crusts. Neither of these charac-

teristics are present in the induced ulcer. The constant reapplication of the caustic destroys these vegetations and crusts never appear.

Chronic ulcers of spontaneous origin and syphilitic gummas have been met with frequently since the outbreak of the war, and they are the two conditions to be distinguished from induced ulcer.

It hardly is necessary to point out the distinguishing features between a varicose ulcer and one provoked and kept in a state of irritation.

An additional point in the diagnosis is found in the vague hesitant and oftentimes embarrassed statements of the patients, frequently farfetched and but little likely to be true. However, the decisive factor is, the final test of an occlusive dressing, either by means of collodion, which the patient cannot remove, or, if the doctor will apply the dressing himself and note the pleating of the bandage about the foot and exact manner in which it is applied and closed, he can usually discover when his dressing has been tampered with. But, an occlusive dressing, regularly applied, will see the ulcer rapidly progress to a cure in a few days.

In very rare cases, a confession can be secured of the means employed to produce the primary lesion and to keep it in a state of irritation. In France, the provocative agent most frequently is a plaster named "vésicatoire Bidet," which is advertised in all the popular journals. Its action is very violent, blistering the skin in a very short time. The erosion thus made is kept in an aggravated state by applications of tobacco-juice or croton-oil.

An explanation of the ulceration can sometimes be found through some happy coincidence. Thus, a soldier with an ulcer on the internal aspect of the left arm came into the service. It was a small wound, rather deep, which had persisted for weeks, and which the man averred had resulted from a shell splinter. It had but one opening, but, the x-ray disclosed no foreign body either in the soft parts or the bone. After a short period of observation, the original wound was suspected to be self-inflicted; so, after a thorough preparation, the arm was covered with an occlusive dressing. In twelve days, the ulcer was completely cicatrized. The patient, knowing that the wound would readily heal when

protected from further interference, applied croton-oil to his left cheek, which produced a pustulous eruption; however, when categorically accused, he confessed, also that the first lesion had been produced in the same manner. He was subject to a form of punishment that most likely would prevent his ever attempting a like ruse in the future.

False Mucous Plaques

A soldier presents himself and, in reply to the question as to his trouble, says: "I am syphilitic, I left the hospital two weeks ago, where they gave me injections, and now these sores have come in my mouth." Upon examination, one finds one or two plaques, red, inflamed, looking like fresh wounds. Further, the papulous projections the surrounding leukoplasia, the peripheral ulceration, the tenacious yellow infiltration-base of the mucous patch of syphilis are absent—conditions that are of the greatest importance in making the differential diagnosis. Concomitant with this, it will be found that the sores are almost always located back in the mouth about two-thirds the distance of the length of a cigarette, on the borders of the palate, on the cheeks, rarely on the tongue, sometimes on the inside of the lips themselves; the reason being that the lighted end of a fresh cigarette is the ordinary means employed to produce these escars. Naturally, they are usually on the left side. The wound rarely is larger than a cigarette end, often a little less, the whole end of the cigarette not having been applied. When found upon the soft palate, they are invariably situated at a point reached by a cigarette held at the end by two fingers.

The frequency of regularity of these signs is remarkably exemplified if, by chance, two soldiers with the same history happen to be in the service and are examined side by side. Left to themselves, these abrasions rapidly heal, showing no tendency to the progressive extension, eccentric or radiating, so characteristic of syphilis.

If, on the contrary, there is an extension of the ulcer, suddenly one sees, in the morning, a violent renewal of inflammatory signs at the base of the sore, possibly at the healthy border (if the lighted cigarette happened to be applied outside), a blister or a whitened, cooked border where part of the burning cigarette overlapped or, if applied in a fresh spot, the signs of a burn are so

evident as to admit of no mistake as to the cause.

Induced Blenorragia

Induced blenorragia had not occurred to me as a means of escaping military service, until one day one of my blenorragia-patients confided to me that, at the solicitation of one of his comrades, he permitted him to take pus from his meatus on the point of a knife, who then introduced it into his own healthy meatus. Sure enough, I found the soldier in question with a beginning gonorrhea. Once started, there are various practices by which the subject delays his cure, the most certain being, the daily imbibing of a certain quantity of some alcoholic beverage. When deprived of this aid, they resort to the inordinate use of condiments or drinking vinegar or anything else designed to render the urine acid or irritating.

False Symptoms Given by Culprits

The patient having provoked troubles often will complain of symptoms having no relation to or with the trouble induced. A soldier coming with an ulcer the size of a quarter dollar will complain of lancinating pains, that he can not sleep, that he can not walk or stand erect, and, when pressed to locate his pain, often will refer it to the neighboring bone. Besides these discrepancies in history and subjective symptoms, it is possible to establish indubitable proof of the simulation by means of the occlusive dressing and subsequent rapid cure.

Often, also, it is possible to persuade the subject by suggestion, to induce a new wound, somewhat as follows. When examining the patient in the presence of the nurses, aids or visitors or other patients, say to the suspected man: "I recognize perfectly that disease. I have seen it a number of times since the beginning of the war, but, I am surprised to find this ulcer in this location; for, it invariably is 6 inches higher (or lower)—it always has been there in the cases I have observed, and this is very well explained in an article by Dr. So-and-So. It does not heal easily". In general, the next day or day after, there will appear a new lesion at the exact point indicated as the ordinary site of this lesion, and this is instant proof of the self-production of the trouble. Or, if convinced of the fraud, the surgeon can size up his subject and say brutally: "My friend, I am perfectly well

acquainted with this ulcer. I have seen a number of them since the war began, it is a false ulcer, you brought it on yourself. Don't deny it. I will give you the friendly advice to let it be cured in the next week. If you do not, I shall turn you over to the provost marshal". As a rule, this patient will be cured in the regulation period, without further trouble.

To get the patient to confess, is a difficult matter; first, because he is ashamed and once having committed himself to a given cause he is unwilling to change his story, second, he is afraid of the consequences of his misdeed, should he confess the truth. Never can an admission be secured in the presence of a third person, nurse or other patient. It must be alone, away from any possible listener, and then in a perfectly friendly manner. If the physician asks the question and promises, on his honor, not to expose the soldier and to help him back to duty without suspicion, it may be possible to learn the truth, for, many of these men are ashamed and would willingly repair their fault if a way were opened to them.

Another course that has had success is, to call the soldier into the office of the surgeon, alone. He stands before the officer who interrogates him about his name, profession, place of birth, date of birth, name of father, name of mother, their profession and residence, as also of any brothers or sisters. Under this category of questions and the stern visage of the questioner, the culprit begins to show uneasiness, especially when questioned relative to his father and mother. As soon as he shows any signs, sternly charge him with his fault and promise him immunity and your aid if he confesses, when frequently he will give in. It is unnecessary to say that these poor devils get no punishment other than their humiliating sense of shame; however, it is of value to the doctor to learn by what agent and in what manner the trouble was induced, for, this is valuable in aiding him

in detecting the next case.

The question naturally arises as to the responsibility of the surgeon of reporting the case to the military authorities—and it is rather a delicate one. Before a court martial, the doctor can produce no evidence except history of treatment and diagnosis. The patient will solemnly deny all culpability and in nine out of ten cases will be acquitted, leaving the surgeon in the wrong. The result of this spreads through the regiment, to the detriment of the surgeon, and lends encouragement to others to practice similar simulations. Moreover it can not but be repugnant to the doctor to denounce one of his regiment—even when rigorous discipline makes it his duty—when he is convinced that the man is not really bad, but, has succumbed to an impulse resulting from ennui, impatience or fear. It is a situation where the surgeon has a perfect right to exercise his judgment.

However, in order to discourage and prevent any repetition by this patient or the multiplication of his kind, it is wise, when convinced of the self-produced nature of a man's complaint, to call him aside at the moment of his discharge and say quietly to him: "I have not been duped. I am perfectly well satisfied that the eruption with which you were troubled was self-inflicted. I shall send you directly back to your regiment, without the customary leave that follows a period in the hospital, and I warn you not to appear again with this complaint." The soldier will salute, without protest, too abashed and too pleased to get off so easily. In addition, it is well to send a letter to the captain of the soldier's company, marked "Confidential", in which you say: "I wish to bring to your knowledge that the soldier N..... has been in my hospital for a skin affection which I believe was provoked by the man himself. I call your attention to this man, in order that he shall not present himself again under like circumstances."



Foot Troubles

By P. COSMAN, Camp Greenleaf, Georgia

Chiropodist, Medical Department, U. S. Army, Camp Greenleaf, Fort Oglethorpe, Ga.

THE use of the feet, in military life, is quite different from that in civilian life, because in the former the feet become the real means of locomotion, instead of mere passive support, and the first trouble encountered in this change of occupation is found when the civilian begins to wear military shoes. The foot ailments of his previous occupations seem to become intensified, because the artificial support of his civilian shoes gives away to the broad, roomy, military shoe, built on real anatomical lines, and the civilian feet have to accustom themselves to them and find new places of support, which, naturally,

and indicate their corrections along general lines: (1) Normal feet, (2) flaccid feet, (3) rigid feet, (4) Spastic feet, (5) Pronated and supinated feet.

The Normal Foot and Its Deviations

The normal foot, when set down upon the floor, will present a broad front view,



Fig. 1. Toes Webbed.

first must become toughened in order to enable them to perform their duties in providing free locomotion.

For the purpose of classification, I will try to describe the following conditions



Fig. 2. Pes Cavus and fifth toe Clawtype.

the toes spreading more or less evenly and in a fan-shape, and capable of plantar flexion. The distal end of the second toe will be found to extend beyond that of the big toe. A perpendicular line extending from the patella should continue over the dorsal surface and end in the interval between the second and third toes. From behind, a perpendicular line extended from the popliteal space should exactly pass the center of the heel where the tendon Achilles is inserted. If the heel turns outward, there is marked pronation and, if inward, supination. The former condition really is worse than the latter, as pronation

invariably is indicative of a tendency to flat feet.

The normal foot really is very flexible, considering its limited movements; that is to say, when the foot has not been abused by ill-fitting shoes. In cases where the foot has been bound by ill-fitting shoes,



Fig. 3. Hammertoe.

the flexibility becomes so lessened that not infrequently rigid foot is the result, and sometimes ankylosis of the first metatarsophalangeal joint. If we draw a line from the inner side of the heel to the inner side of the big toe, this will be a perfectly straight line.

The foot presents two arches, namely, the longitudinal arch, which runs from the inner side of the heel to the first metatarsophalangeal joint, with the scaphoid for its apex; and the anterior metatarsal arch, formed by the distal ends of the metatarsal bones, the interval between the second and third metatarsal bones forming the apex.

The posterior arch is formed by the scaphoid, the external, middle, and internal cuneiform bones and the cuboid, with the middle cuneiform for its apex. When these arches are formed in correlation to

each other, the step will be markedly springy. If the correlation between them is impaired, we shall find either a rigid or a flaccid foot.

The flaccid foot will be markedly pronated, but, not so the rigid foot. That pronation sometimes is so marked that the scaphoid bone actually touches the floor. In this case, no arches exist and the plantar surface is completely flattened out. Strange to say, the subject often is able to do hard work despite such abnormal feet.

Other deviations of the normal foot are: Hallux rigidus, hallux valgus, overriding toes, hammer-toes; clubbed, webbed, and claw-toes; ingrowing, inverted, and hyperthrophied nails, and all the different forms of corns, warts, nevovascular growths on the plantar surface, hyperhidrosis and bromidrosis, callousness, blisters, cracked toes, dhobie-itch, eczema, and lots more. Some of these conditions are so severe that they exclude a man from military service, only



Fig. 4. Hammertoe.

surgical intervention being capable of rebuilding such feet to a semblance of a normal state.

When the great toe overlaps the second and third toes and points toward the outer border of the foot, we have a typical case of hallux valgus, often combined with an exostosis of the heel of the first metatarsal bone, and, with an inflamed bursa, forming

the socalled bunion. Surgical intervention may straighten the toe, but, occasionally ankylosis of the joint has supervened, so that the foot will be useless for military duty. Hallux rigidus, or rigidity of the great toe, interferes with the capacity to march. Hammer-toe, or contraction of a toe (usually the second) often is disabling, and surgical intervention will be necessary. In case of an exceedingly high arch, we find the toes very much contracted, and then we have the socalled claw-toes. Overriding toes, often the result of hammer-toes or from wearing narrow-pointed shoes, can be remedied with mechanical treatments, with the exception of hammer-toe, in which case, surgical intervention is necessary.

The Flaccid Foot

The flaccid foot is easily diagnosed, not only by its flabby appearance, particularly at its plantar surface, which looks as if it were withered and usually is sweaty, but,



Fig. 5. Underlapping first, fourth and fifth toes.

also by other symptoms, of which the following are the most typical:

Constant pain and pronounced weakness. The pain in the foot starts when the patient attempts to walk, but, this soon wears off and then is felt more in the calf and thighs. Sometimes the sense of pain is experienced in the lower spine, in the form of a gnawing pain. The pain is more severe after resting and cramps and spasms are

prone to follow. The patient complains that even the pressure of a bed sheet is agonizing and prevents sleep. The longitudinal and posterior arches are painful to the touch, while the anterior arches usually are loose. The foot feels distinctly spongy.

Such a foot lacks complete support for the body and, unless lifted by a flexible



Fig. 6. Fallen transverse arch with neurovascular growth under head of third metatarsus.

arch-support, the patient requires professional attendance. Rest is a great help in such cases; however, general toning up of body and mind, massage, and passive manipulation of the legs and feet, besides properly fitted arch-supports, eventually will make such feet useful again.

The Rigid Foot

This condition is not always the result of ill-fitting shoes; however, arthritic conditions, adhesions, and periarticular infiltrations will set up conditions of limited mobility, and it is good judgment first to find the cause of the rigid condition. We must look for old sprains, surgical interventions, traumas, contusions, contractions, old fractures, and so forth, and ascertain whether by means of manipulation we can restore mobility. The results of this treatment often are very gratifying if persisted

in. If in doubt, an x-ray picture will disclose the true condition, as sometimes muscular spasms are caused by a tuberculous foot. The best way to restore mobility is, by means of manipulation, and, as this calls for a good knowledge of the anatomy of the foot, it is best performed by a physician, and should not be done by unpracticed hands, as damage might result. It requires from two to four weeks of daily treatment to restore mobility, which often will be completely restored, particularly if the rigidity was owing to fibrous ankylosis, the result of an operation, and provided no exostosis exists.

The Spastic Foot

In cases of this kind, the origin of the trouble lies in the peroneus longus and brevis and as a rule is not amenable to treatment. Severing of the tendons of the peroneus will be necessary. After the lapse of four weeks after this operation, the feet are to be treated in the same manner as is the rigid type, when recovery is complete.

Another form of rigid feet is the socalled osseous flat foot. As mentioned above, the scaphoid bone practically rests on the ground, the whole foot being pronated and completely flat and hard. Even if the patient is able to perform hard labor despite these feet—often encountered in carpenters—he is not qualified for military service.

Pronation and Supination

In these two conditions, the heel comes in for close examination in conjunction with that of the longitudinal and anterior arches. In pronating feet, the heel turns outward, and inward in the supinating variety. Much pain is experienced after a long walk or march, and often the calves of the legs manifest contraction of the muscles. Rest, massage, and properly fitted, flexible (*not metal*) arch-supports will relieve this very common condition. It may be necessary to heighten the heel or the inside of the sole of the shoe, at the side opposite the trouble. After this treatment has been properly given for a short period, the muscles will be restored to their relative correct position and all trouble disappear.

Metatarsalgia

One peculiar trouble of the anterior arch is, metatarsalgia, a severe pain located between the fourth and fifth metatarsals. This often results from the flattening or even only compression of the metatarso-phalangeal arch. In the latter case, anterior arch support mostly is all that is necessary to restore the proper balance. Often these affections are the result of short Achilles tendons, and call for surgical intervention. Bursitis and periostitis at the insertion of the tendon at the os calcis are other conditions; they do not, however, necessitate operation, unless there are exostoses. Most conditions of hallux valgus and rigidus, hammer-toes, or Morton toe, and deformities of the little toe require operation to correct their positions.



Fig. 7. Little Toe overlapping Fourth.

While the modern chiropodist is best qualified to remove corns, hard and soft, bunions, warts, and other abnormal growths on the feet and to apply the indicated corrected arch-supports and manipulations of the feet, the surgical interventions are, of course, to be performed by competent orthopedic surgeons. In this way, many men, otherwise rejected for army service, can be made useful, not only for service, but also after their return to civil life.

It is to be hoped that after the war is over, the lesson of what a good shoe consists in will be learned, and there will be less foot trouble to contend with. It is not an exaggeration to attribute eighty percent of foot trouble to faulty footwear.

After Thirty Years—IX

Notes and Reflections on Life and Work

By WILLIAM RITTENHOUSE, M. D., Chicago, Illinois

[Continued from December issue, page 911.]

Calling the Doctor

WHEN I was in active general practice, there was no subject on which I wished more earnestly to enlighten my patients than the need of sending in their calls early in the day. I found that the larger percentage of my calls were sent in so late in the day that the visits had to be made in the evening, when I should have been resting at home and recuperating my strength for the following day. It was no uncommon thing for me to sit around the office all day long, with little to do, and then having to make half a dozen calls after the evening office-hour. Many of my younger readers no doubt will say that they are so glad to get the business that they are willing to accept it at any time of the day. Very true, but, when your work reaches the point where you are bordering on the limit of physical endurance, it becomes a different matter. Here's hoping that you, my young aspiring friend, may reach that point soon. And it is for that time that I am writing.

The nonchalance with which some of these people would assume that I would just as soon work after dark as in the daytime was exasperating. A man, for example, would stroll in during the evening office-hour and say: "Can you come with me over to the house? My wife has not been very well the last few days and I think you had better see her." He would, apparently, be quite unconscious of any hardship in the matter for me. He assumed that I had nothing else to do in the evening but to sacrifice my hours for rest, recreation, and social life for the benefit of people who were too lazy, too shiftless or to indifferent to send in their calls during the proper hours of business.

Of course, I recognize the fact that to some extent this difficulty is unavoidable; but, this is all the more reason for cutting out the avoidable. Sick people are very liable to feel worse and to have a higher temperature toward evening, and many a

patient that at noon did not seem ill enough to need a doctor may have alarming symptoms after sunset. Then another point to be remembered is, that, in many families, especially among the more ignorant foreigners of the laboring class, the wife hardly dares to say that her soul is her own; so, if she were to incur the expense of a doctor's visit without consulting her lord and master, she would be in for a warm time when he came home. So, a good many calls for the doctor are not sent in until the man of the house comes home at night.

It is not easy to overcome this difficulty —impossible to overcome it entirely. When the call comes in, it is well to ask for full information as to the nature of the trouble, how long the patient has been sick, and whether he is suffering acutely or not. If he is, the visit should be made, if possible; the doctor can not afford to disregard real suffering. If the symptoms are not urgent, the doctor may say: "My time this evening is very fully taken up, while, if I were to come, it would be quite late. Now, I can give the patient quicker relief if you will send a messenger to my office at once for some medicine; or else to the drugstore, when I can give the druggist a prescription by telephone. Then I shall call in the morning."

Do Not Lose Your Temper

The temptation is very strong to express one's irritation; this, though, is not good policy, if one wishes to retain the patronage of the family. It is important to appear (*and to be*) anxious to relieve suffering as quickly as possible. Whether the visit is made that evening or the next morning, the doctor should not miss the opportunity of doing a little "educating" by remarking: "I can give you better and prompter service if you will send in your calls early in the day whenever possible. So many people wait till evening to send that my evenings are overcrowded, while during the day I have plenty of spare time. It is not so much night-work that wears a doctor soldier's physical, spiritual, and economic

out as it is the evening-work. The night-work comes only occasionally, the evening-work, however, is a daily affair. Very often I have to travel over the same ground in the evening that I have already been over in the day."

People very likely will reply: "But, what, if the patient was taken sick only in the evening?" The answer should be: "In that case, any doctor will be glad to respond promptly. That would be no hardship, because those cases are few. The majority of evening-calls are for patients that have been sick all day and just as well could have sent earlier."

Going over the same ground two or three times in one day, wastes a great deal of time. Especially when patients live at a distance does this difficulty become serious. To make a call ten or more miles away and then, after returning home, to get a call from the same neighborhood to visit some patient too negligent to send in the order at a reasonable hour is highly exasperating. I have often said to such people: "I have just been in your locality. I am sorry that I did not know earlier that you wanted me. If I make a second trip over there today it will compel me to neglect a number of patients nearer home. I am afraid I can not come before tomorrow."

Another trial of patience for medical men is, the person who sends an urgent call when the matter is not urgent at all. Doctors, as a class, are fairly unselfish and ready to sacrifice their hours for rest, meals, and social enjoyment in any case that is really urgent, such as a serious accident or a patient in great suffering. In my early practice, I soon learned that there were people who would send a "hurry call" for the doctor to come "right away", and then, when, perhaps, I had left an unfinished meal or a much needed nap, I would find some quite ordinary case of no urgency whatever; and, before long, I made it a point to ask for particulars. I would say, and I instructed my family to say in all cases of "urgent" messages: "Give me some idea as to what is the matter, so that the doctor may come prepared."

There was one druggist in particular who was sinner-in-chief in this respect. He would send every message as a hurry call, whether it had come to him as such or not. I said to him, as I said to many patients: "If you send all calls as urgent, the result will be that the doctor, after being fooled

a few times, will become indifferent, and sometime, when there is a bad accident, he will take his own time about coming, and the result may be serious. It will be like the old fable of the shepherd-boy who cried 'wolf' so often for fun that when the wolf really did come nobody paid any attention to him."

A doctor that has a large practice can not make every call at once, and he can give better service if his patients will co-operate with him by sending a little correct information with the call.

Closely allied to this nuisance is the man who wants you to leave during your office-hours, even though there is nothing especially urgent about his case. He comes into the office when, perhaps, there may be no patients waiting. He says: "Can you come to my house at once?" I answer, "As soon as the office-hour is over I shall be there." "But", he urges, "there are no patients here. Why can't you come now?" I reply, "It is true there are no patients here now; but, there may be the next minute. Some of my patients come long distances, some even from out of town, and it is not right to disappoint them." He is still unsatisfied. I say to him, "Let us turn the thing around. Suppose you came five miles or forty miles to see a doctor at his office-hour and found him out making calls. Would you not feel that he was treating his office-patients unfairly?" Of course, in great emergencies even office-patients must come second.

The Man Who Wants to Help

There is one kind of patient who often is a good deal of a nuisance; however, we can afford to regard him with an amused tolerance, because he means so well and really thinks he is doing you a favor. I refer to the man who brings the doctor a new remedy, a "sure cure", and wants him to try it. These people imagine that the practice of medicine is simply a process of trying things that are "good for" this or that disease—a sort of glorified collection of old-women's nostrums. Well, we must admit that there still are some physicians whose conception of the healing art is about on that level. Modern scientific medicine, though, is quite another matter.

It would be amusing, if it were not so disgusting, to see some novelists set forth their ideas of the practice of medicine. There is one American woman story-writer

in particular whose descriptions of silvan and rural life have a certain charm, but, when she dips into medical matters, she furnishes the profession with material for hilarity or nausea, according to the reader's temperament. She pictures a boy of wonderful genius living in the forests of northern Michigan, cultivating medicinal plants, finding a "sure cure" for pneumonia, and presenting it to the American Medical Association. Her description of that august body in session in an eastern city, sitting at the feet of this youthful prodigy as the Jews of old sat at the feet of Gamaliel, leaves one in doubt as to whether to regard it as unconscious humor or as an emetic. The A. M. A. has much to answer for, but, not that, thank heaven, not that!

There is in this city of Chicago a business-man, who in all the ordinary affairs of life is exceptionally shrewd and intelligent. But, he has one hobby about which he is incorrigible and about which his common-sense seems to desert him. Every now and then he brings me some nostrum that he has "discovered", and wants me to try it in my practice; and he is a little puzzled over the fact that I do not enthuse over the matter in the way he does. In a financial transaction, no one would be quicker than he to detect the "goldbrick", if it contained one. Yet, in regard to the health of himself and his family, he seems ready to swallow any humbug that comes along. He is simply a "sucker" so far as medicine is concerned. This phenomenon is a perpetual puzzle to me. I have seen many examples of it.

This man's latest find came along some two years ago. He said to me one day:

"I have something new that I want your opinion on. It was discovered by a friend of mine, a druggist on the Pacific Coast. He says that there never has been known to chemists any way of dissolving sulphur. He has worked on it for fifteen years and has at last found a way. He makes no secret of the fact that it is simply dissolved sulphur, only the method of dissolving it he is keeping secret for the present. You see that it is not a patent medicine, but, I have never found anything that does me so much good as this." (There is nothing the matter with him except that he eats too much.) "When I don't feel well, I put a few drops of it into a glassful of water, drink it, and in a little while I feel fine." He insisted upon bringing me a sample. Examination proved it to be simply a weak solution of sulphurous acid in water with a little coloring matter; in other words, it was a repetition of a notorious "microbe-killer" widely advertised some twenty or more years ago. Such things make one wonder whether the laity will ever develop an intelligent view of the practice of medicine.

And, yet, as I lay down my pen, the thought comes to me that, while we are making merry over the financier who does fool things in the medical line, what is the financier thinking of doctors that buy stock in gold-mines that exist only on paper, or land in Florida that they have never seen and which can be seen only by looking over the side of a boat, or finance-schemes for breeding stingless bees or making candy out of cactus?

[To be continued.]
2220 Warren Ave.

The Reeducation of the Blinded Soldier

By EMMA KASPAREK ENGLAND, B. S., Prairie du Chien, Wisconsin

University of Wisconsin, Prairie du Chien, Wisconsin.

WHEN Canada decided to send half a million men to the defense of her mother country, the national mind generously shouldered the responsibility of caring for those who gave their all for the national welfare.³² The government endowed the Military Hospitals Commission (later changed to the Invalided Soldiers Commiss-

sion) with authority to work out a plan for the reeducation of the disabled members of the Canadian expeditionary force upon their return to Canada.³³ The president of the Commission is J. A. Toughend and the secretary is F. H. Scammell, Ottawa, Ontario. The aim of the organization is, to do everything that is best for the returned

soldier's physical, spiritual and economic well-being.³⁷ Public effort assists the government to insure the returned heroes a bright outlook upon life and a training for self-support.³⁸ After proper medical attention, the advice of a vocational counselor is given. He is a man possessing broad knowledge of various industries and the training necessary to follow them. Of course, the question of supply and demand must enter, so that men will not be trained in occupations that produce too many uncalled-for articles. Then, too, the man's own desires must be taken into consideration.

The Military Hospitals Commission has arrived at a scheme providing for the re-education of discharged soldiers. In nearly every province of Canada, there is: (1) a provincial disabled-soldiers training board, which determines who are fit subjects for vocational reeducation; (2) a body for each province that has general advisory powers for the coordination of local efforts; (3) vocational officers, who are in immediate charge of the work in each locality under the direction of the vocational secretary of the commission, with headquarters at Ottawa.³⁹ The Canadian government has learned that even in countries where perfect administrative detail is a passion confusion is bound to arise if the care of the maimed is divided among various departments of state, because there then is overlapping and waste of effort and of expenditure, resulting in disadvantage of the patients.

At first, the members of the commission thought that what the returned soldiers most needed was, a convalescent home where rest and refreshment might be secured. Scores of beautiful houses were offered to the commission, luxuries were supplied to the returned men, discipline was relaxed, and other kindly attractions were offered that might have proved beneficial to men who remain in hospitals for a short time before resuming an ordinary occupation. However, this treatment was found detrimental to best interests of men that must remain for long periods. These homes should not have been thought of as places for relaxation, but as places of rehabilitation; and now they are being changed from convalescent homes to mili-

tary hospitals, where, after physical restoration, the evil effects of idleness are warded off by profitable occupation.

The soldiers take great interest in their training, because they are told that their earning-power will not interfere with the amount of their pensions. Representatives of the Military Hospitals Commission and of the Canadian Patriotic Fund meet discharged men upon their arrival at a Canadian port, and, again, local committee-men meet the trained soldiers when they arrive home. These services often are performed at inconvenient hours, but, willingness on the part of people who volunteer the kindness has never been found wanting.⁴⁰

The Canadians are thankful, because the number of blinded that have returned is less than was expected. Only twenty Canadian soldiers were blinded in the first three years of the war, nearly all of whom remained at St. Dunstan's Hostel, London, for training. Of the nine that returned to Canada, one came to the Halifax School for the Blind for instruction. A second has entered the insurance business; a third, who had previously completed a course in electric engineering, is employed with the Hydroelectric Commission, Hamilton. A fourth is receiving instruction at Montreal, a fifth is learning to be a stenographer and dictaphone-operator at a convalescent hospital in Winnipeg. Four more do not care to accept any assistance from the Military Hospitals Commission. One has nearly completed his training as a masseur in St. Dunstan's and will be employed at Toronto.⁴¹

Private Smith attended the blind-school at Montreal. Every day a visitor sent by the Canadian Patriotic Fund read to him. Mr. Smith became tired of the work he had to do at the school and returned to his homestead, but, he had learned one thing: that his fight was half won, because he had emerged from out of the spiritual darkness. Upon leaving, he was presented with a braille typewriter, which he had learned to use, a blindman's watch, and an outfit of clothing. Every week he receives a letter from a girl who has learned braille in order that she may write to the blind. Private Smith divides his work into three parts: he peddles aluminum ware and books on farming, he shovels grain in the thresh-

37. American Journal of Care for Cripples, 4: 17.

38. Sessional Papers, p. 45, No. 35a, 1915.

39. Military Hospital Commission, p. 50, May, 1917. 39.

40. Special Bulletin of the Military Hospital Commission, p. 6-8, 1916.

41. Special Bulletin of the Military Hospital Commission, p. 38, 1916.

ing season, and, when the country-fair time comes, he offers soft drinks for sale. Besides, he does the typewriting at the local hotel. What counts for more, he writes letters of encouragement to other blinded soldiers, telling them that the first duty of a blinded man is, to be cheerful.⁴²

Aid for the Blinded Heroes of Belgium and Italy

Although the cruel hand of Germany has nearly laid prostrate the little country of Belgium, the world offers it tribute, because it has the vitality to establish reeducation at schools outside of its borders. In Belgium, it was necessary to act quickly. The minister of war realized the importance of the situation and, so, appointed an efficient man, M. de Paeuw, to establish a fitting institution for the training of the disabled. In four months, the institution was ready for service. It is beautifully situated at Port-Ville, France, on the left bank of the Seine River, overlooking islands abounding in trees, carefully cultivated farm plots, and pleasantly situated villages.

Today, "a buzzing hive of soldiers" has broken the stillness of the wild wooded fields. Mayor Harcourt is supervisor of the establishment, and, with the aid of a devoted competent staff, the disabled heroes are learning to become useful citizens. Workshops are organized in conjunction with the school-work, and all the articles made are sold. The doctor's advice, the individual's inclination, and the economic problem of supply and demand are the determining factors in the selection of a trade.

The maimed arrive in groups after physical rehabilitation at a hospital is completed;⁴³ but, the blinded are encouraged to attend the Phare de France, which is wholly devoted to those that have lost their sight.⁴⁴ Miss Winifred Holt, who established the Phare de France, welcomes the Belgian and Italian soldier, as well as the French. In France, a beautiful scene of the winding Seine, a field rich in thickets of oak and birch, a place of musical notes of song of wild bird was chosen for a site for the institution of vocational reeducation of the Belgians; in Italy, a like magic transformed the palace of the Bourbon kings of Naples into a home for the dis-

abled Italians. The once luxurious chambers of the palace have become sunny school-rooms for brave soldiers.⁴⁵ The rich Villa Merafiori in Rome, an American academy, also was equipped for the reeducation of the disabled Italian.

As in the other allied countries, the wounded and rehabilitated soldiers of Italy were suspicious when they were asked to learn a trade. They feared that the government pension would be withdrawn if they became able to earn a living. So, they sat in the royal garden and enjoyed the sunshine and flowers and the fickle lights on the Bay of Naples, and compared a life of future idleness with what it might have been if war had not been declared. Their pathetic dreams of a life of future emptiness was interrupted by the instruction that their pensions were but a supplement to their earning wages. Then they went to work with the unaffected joy of schoolboys.

During the absence of the King at the front, Queen Elena gives much of her time and strength in seeing to it that recreation is given to the men that came back. She entertains them in the Royal palace.⁴⁷ The Italian soldiers, the same as the Belgian, when they have been so unfortunate as to lose the sense of sight, are requested to take the special training for the blind in the schools established in France. An international school for the blind of the allied armies will soon be in operation in Genoa, Italy.⁴⁸

Uncle Sam's Plans for Blind Soldiers

Unlike France and England, both of which have had to depend upon voluntary contributions, the United States government has said that citizens who are blinded while fighting for their country shall be rehabilitated, reeducated, and taken care of at the expense and under the direction of the government. Representatives of the Surgeon-General's office thought it best to take the advice of representative workers for the civil blind in working out a system of training. Questionnaires were sent to workers for the blind throughout the country, asking for suggestions. The Committee on Ophthalmology of the Council of National Defense met at Washington, October 12, 1917, and remained in session for two days. They offered the following sug-

^{42.} Survey: "A Canadian City in Wartime," 38, April 7, 1917.

^{43.} American Journal of Care for Cripples, 4: 179.

^{44.} Survey, p. 43, Oct. 4, 1917.

^{45.} Boston Globe, Mar. 11, 1917.

^{46.} Boston Globe, July 7, 1917.

^{47.} Boston Globe, Mar. 11, 1917.

^{48.} New York Times, Mar. 17, 1918.

gestions to the Surgeon-General of the Army:

An executive officer, with one or more assistants and a secretary, should be sent to France, with authority to determine the number of teachers required and their qualifications. They advised that at least one blinded teacher should be included in the staff, because his example would be an inspiration. The executive officer should have his office at a special hospital center.⁴⁹ The council arranged for efficient supervision and encouragement, as also for the services of a doctor from the time the soldier received the first dressing.⁵⁰ Blinded soldiers should not be in a ward by themselves, but, should be in the company of other patients, so that they may secure the assistance of their comrades and that their interests may be broadened. Physical and mental occupation should be provided for the convalescent, to create a spirit of hopefulness and to avoid retardation. These activities should continue on shipboard on the homeward journey. Men otherwise wounded, should be coached to give the blinded the assistance and encouragement.

After the soldiers arrive at the port of entry in the United States, provision should be made for their entertainment in the hospital at the port until they are dispatched to the station for reeducation of blinded soldiers. The station shall be near the eastern seaboard and of a size to accommodate not more than 200 men. The director of each station shall appoint teachers that are efficient. Suitable instruction shall be given in reading and writing the approved uniform embossed system, writing with pencil and typewriter, transcribing from the dictaphone, and telephone switchboard operating. Practical trades, such as broom-making, basket-making, mattress-making, rug- and carpet-weaving, farm work, mat-making, carpentry and joinery, net-making and coarse knitting, and winding of coils for armatures, will be taught. The men will be trained to help themselves dress, shave, handle knife, fork and spoon at the table, walk with a cane, write with a pencil, and sew on buttons.⁵¹

Professional training will be given to those that show indications of being successful. If a college training is asked for, it shall be given, especially if a course was

begun before the victim's entry into the war. Readers will be provided by the staff in charge.⁵²

Instruction in physical training will include medicine-ball, pushball, punching-bag, relay races, gymnastics, field sports, running, climbing, swimming, diving, skating, bowling, tramping, boating, et cetera. Such table-games as cards, dominoes, checkers, chess, parchesi, backgammon, fox and geese, solitaire, and marbles will be taught. Recreational shall be provided in the form of dancing, singing, cross-country walking, roller-skating, attendance at the theaters, musical and various other forms of entertainment.

The reading to be embossed will be classified as follows:

Best short modern fiction: stories, detective tales, et cetera, 50 percent.

History and biography, including sketches of blind men, 10 percent.

Adventures and travel, 10 percent.

Popular science and European war, 10 percent.

Social science and government, 5 percent.

Humor, 5 percent.

Poetry and general literature, 5 percent.

Alphabet cards, practice sheet, 7X primer of the braille, 5 percent.

The time required to reestablish the blind soldier in living condition and independence varies from three months to a year.⁵³ During the period of training, the pupils are under military control. This has its advantages, because the routine of military authority is familiar and will drive away depression; it insures the accomplishment of some course in training; it prevents loving relatives from persuading the soldier not to return to school after his vacation, and it makes certain the returning of a useful man to civil life.⁵⁴

At the director's recommendation, the soldier is discharged and employment is procured. Whenever this may be possible, it is deemed wise to return a man to his former occupation or to one closely allied to it. Another good plan is, to teach a member of the family to help to keep the blinded man occupied. There should be civil-service regulations for opening new occupations for the employment of the blind. The followup work should be systematic and dependable. Individual volunteer work should only supplement the work

49. Outlook for the Blind, x1:51.

50. Survey, p. 352, Dec. 22, 1917.

51. Outlook for the Blind, x:50.

52. Survey, p. 352, Dec. 22, 1917.

53. Outlook for the Blind, x:50.

54. See reference No. 52.

of the employment agent, and it should not be overestimated.

In summary, the pyramid outline following suggests the plan accepted by the United States Government.⁵⁵

From the data in this article, the following conclusions may be given in the form of a summary:

Conclusions

1. A new department for the soldiers civil reestablishment has been added to the governments of the warring nations. Military authorities, assisted by philanthropic organizations, take the disabled soldiers and give them physical, spiritual, and industrial training, so that they may become useful citizens.

2. A scale of pay and a pension is allowed to the soldiers while in training, thus providing for the support of dependents.

3. Every one of the allied countries, with the exception of Belgium, has a special institution for the training of the war-blinded. Training begins at the base hospitals and is continued until one or other of the following trades are mastered at a special school for the blind: broom-making, mattress-making, basket-making, rug- and carpet-weaving, telephone-operating, various forms of farm work, mat-making, winding of coils for armatures, piano-tuning, salesmanship, massage, stenography, carpentry, and knitting.

4. All of the blinded learn braille and typewriting.

5. Amusements, in the form of gymnasium exercises, table-games, and recreation out of doors, are provided.

6. The men in training are under military control until they are prepared to support themselves.

7. All countries are providing followup work by an after-care committee, who visit them regularly after they have gone into business for themselves.

This new work in education is in an experimental stage. Everything that human mind can conceive is being done by those to whom the work of supervision is entrusted, so that the blinded war-victims will take courage to face the future, with the feeling that much happiness still is in store for them.

Supplementary

Shortly after the completion of this paper, the annual meeting of the American

Medical Association was held in Chicago. A special session was set apart for the discussion of methods as to the best way of carrying out plans for the reconstruction and rehabilitation of our disabled soldiers, sailors, and marines. Addresses were delivered by many celebrated medical men from Europe and by our own equally celebrated medical men. As this is in line with the thoughts expressed in the foregoing article, selections are made from these addresses, for the benefit of the readers of the original paper.

The chairman, Colonel Billings, in speaking of doing something for our disabled men, said: "We want to make them well again; we want to cure them, if we can; and we want to restore them to civil life, that they may take their places in economic life again as capable of earning a living wage or salary as they were before; and also, to enjoy life as we want them to enjoy it, because they certainly have earned it."

The Surgeon-General of the Army said: "By examining the statistics of the Canadian army, we get a pretty good idea of what we are going to have to do. They have sent over some 350,000 men; they have been at war now about four years. Of the men sent across, they brought back about 10 percent for this reconstruction work."

Recently, Congress has enacted a law that places the disabled soldier within the authority and jurisdiction of the federal board for vocational education.

In speaking of the war-blinded, Colonel Bordley, on the staff of the Surgeon-General, said:

"The attitude of the blind is not, happiness, but, rather, an attitude of resignation. Strange as it may seem, every great advance in the treatment of the blind has followed in the wake of war, and this war has proved no exception. The surgeon-generals of our Army and Navy have combined forces and together they are going to educate the soldiers, sailors and marines. This education is to be given them in a military training school for the blind, which is to be located on a magnificent estate in Baltimore. This school is to be conducted by the best teachers of the blind in this country. It is to have every appliance that is known and is available in the development of the powers of the blind. When they complete their courses in that

⁵⁵. See reference No. 53.

⁵⁶. *Outlook for the Blind*, x:51.

⁵⁷. *Outlook for the Blind*, x:51.

school, trial employment will be given them.

"We divide the blind into five classes: those who can work at home; those who can work in blind-shops; those who can enter industry; those who can go into agriculture; and the professional classes. We are not going to let any of these blind men get away from us until we know that they are ready to go to work.

"We recognize that the blind man has three serious difficulties to overcome before he can make his own living. The first difficulty is, his timidity; the second is, the misplaced sympathy of his family and friends; and the third is, the reluctance on the part of industry to employ him. To help him to overcome his own handicap, we are going to educate him. To help the family to realize the man's ambitions, the man's troubles, to see the necessity for their moral support in his work, we are going to take

one member of the man's family to Baltimore and educate her side by side in our school with the man himself. We purpose to keep that person in Baltimore in the house that will be conducted by the Red-Cross institute, without cost to the family. To overcome the difficulty of the reluctance of industry to employ the blind, we purpose to help the blind man to demonstrate to industry that he can take his place and do his part."

One of the speakers, Colonel Bruce of the English army, in closing his address said:

Let us all hope that such happiness is in store for our blinded heroes.
There is a light about to gleam,
There is a font about to stream,
There is a midnight darkness, changing into day;
Men of thought and men of action clear the way.

A Study of Influenza and Epidemic Pneumonitis

By HYMAN I. GOLDSTEIN, M. D., Camden, New Jersey

[Continued from December issue page 908.]

Prophylaxis

THE disease is highly contagious, as much so as measles, and probably is most readily transmitted by the nasal, pharyngeal and bronchial discharges, especially in coughing, spitting and sneezing and probably also by blankets, handkerchiefs, clothing, et cetera, used by careless patients. Early recognition of the first cases and prompt and complete isolation are necessary. Every patient should be strictly confined to bed until symptoms have completely abated. Isolation should be maintained throughout convalescence. Health authorities prohibited public gatherings. Moving-picture houses, churches, ice-cream and beer saloons were closed, as well as the schools. Emergency hospitals were opened in many cities.

Those exposed to infection or in danger of being exposed, and all members of families where a case of this epidemic influenza is already existing, should be immunized with Combined Influenza Vaccine in fairly large doses. There is now abso-

lutely no doubt as to the great prophylactic value of properly and freshly prepared combined influenza vaccine, containing *B. influenzae*, *micrococcus catarrhalis*, *pneumococci*, *streptococci* and *staphylococci* and probably also *B. Friedlander*. Many hundreds of employes of the Bell Telephone Company of Pennsylvania were immunized with the mixed vaccine and most encouraging were the results. From all over the country, satisfactory results were obtained from the prophylactic use of these vaccines. Very few of those persons inoculated early developed the disease. Even the few who were immunized and then taken down with the disease, did not have a severe attack and were quite free of complications. In my own experience, only two or three developed slight symptoms of the disease and promptly recovered, out of a fairly large number that were inoculated for prophylactic purposes.

Dr. Solomon Solis Cohen believes that the mixed bacterins (vaccines) are as valuable and efficient in the treatment and prophylaxis of influenza and its complica-

tions as mercury is in syphilis and quinine in malaria.

Dr. Wm. E. Robertson has used the mixed vaccines in hundreds of cases, even intravenously, with wonderful results, in the treatment of the disease and its complications.

Thousands of soldiers have been so inoculated in several of the army camps. Thousands of people were successfully inoculated and saved from serious illness in New York City, Chicago, Philadelphia and other places. Among 670 cases in which prophylactic immunization was done by Dr. Napoleon Boston, no cases of the disease occurred.

Prophylactic immunization has been practically demonstrated in many of the large industrial plants in the Philadelphia vicinity which territory was early affected by the epidemic influenza.

Some of the employes of the Philadelphia Electric Company who had contracted influenza before the course of prophylactic immunization was instituted, were treated with the influenza vaccine, and not one of these died! The initial dose given to patients suffering from influenza was 1 mil in cases which were not serious and 1.5 mil or more in desperate cases. The injections were continued (if necessary) every 24 hours with the same dosage until a favorable prognosis was noted.

These favorable results prompted other large industrial plants and public institutions including the health boards to employ immediate prophylaxis toward preventing the spread of this influenza epidemic. Notable among these institutions are, the U. S. Steel Corporation, American Steel and Wire Company, of Ohio, Bell Telephone Company, of Pittsburgh, Pa., and others.

Eyre and Lowe, in *The Lancet*, (Oct. 12, 1918, p. 485-7) report upon vaccines used in 1000 cases for prophylactic purposes. They conclude that (1) There may be no reaction. (2) There may be slight reaction—this is the most likely result and will probably occur during the first 24 hours after inoculation and, apart from a possible tenderness at site of injection, may produce a slight malaise, and stiffness and headache. (3) There may be a severe reaction.

In my experience, reaction was of no consequence and, if it occurred, was very

slight. The tenderness and stiffness of arm injected passed off in 24 to 48 hours.

The immunity probably lasts from two to six or eight months.

The employment of properly made gauze masks over the face to prevent the transfer of infection to others and to yourself has proved a valuable prophylactic measure. The importance and value of such face masks has been noted and emphasized by George H. Weaver (Chicago), J. A. Capps, Haller and Colwell, A. B. Lyon and B. C. Doust, Hamilton (1905), S. J. Meltzer (1916). Many of the masks used were nothing more than mere camouflage, being made of one, two, or three layers of thin gauze and, hence, absolutely worthless. Masks should be made of good size, of six or seven layers of gauze, or else several layers of gauze with some sterile absorbent cotton between them in sandwich-like fashion (this latter method was used by me). It is advisable to use a spray of 3 to 5 percent dichloramine-T in chlorcosane on the face masks—this is unirritating, does not "wet" or soak the gauze, and is very efficient; repeated spraying should be resorted to. The mask should have an appropriate or suitable mark on the outer side, so that, if the mask is removed for a few minutes, it will always be replaced with the same side out. As these masks are cheap, it would be advisable to change them often, or to use a new one, when the mask worn is temporarily taken off. Doust and Lyon (*Jour. A. M. A.*, Oct. 12, 1918, pp. 1217-1219) conclude that—

1. During ordinary or loud speech, infected material from the mouth rarely is projected to a distance of four feet, and ten feet; which constitutes the danger zone about a coughing patient.

2. During coughing, infected material from the mouth may be projected at least ten feet. The danger zone about a coughing patient has, then, a minimum radius of ten feet.

3. Masks of coarse or medium gauze of from two to ten layers do not prevent the projection of infected material from the mouth during coughing. Such masks are worthless, therefore, in preventing the dissemination of respiratory infection.

4. A three-layer buttercloth mask is efficient in preventing the projection of infectious material from the mouth during speaking or coughing. It is a suitable mask, therefore, to be worn in connection with respiratory diseases.

The use of mild antiseptic washes for nose and throat is recommended. I used

Liq. Thymolis Comp., (diluted with several parts of warm water), or Liq. Antisepticus Alkalinus Compositus.

Dichloramine-T in chlorosane, in 3 percent solution, or chlorazene solution, or acroflavine 1:1000 may be used in sprays of nose and throat.

The Treatment of Influenza

The treatment is, principally that 1, by mixed or combined influenza vaccine or combined *M. catarrhalis* vaccine or by serum from convalescent patients; 2, hygienic and dietetic measures; 3, symptomatic and supportive remedies.

The alkaline treatment, the acute-nephritis treatment, the anticipatory treatment, the expectant watchful treatment, all have their supporters and all have produced good results. Of course, the ideal method would consist of immunizing the patient's family with vaccine or, if it were possible, with an efficient toxin-antitoxin, as in diphtheria, and the use of specific anti-serum or antitoxins. Unfortunately, we have no such efficient agents as yet, as we have not been informed by the numerous research men and investigators as to the exact cause of this most contagious and infectious disease—probably the most contagious disease of all infections, when occurring in pandemics of this nature.

In view of the fact, that we have no antitoxin, I started out to use rather large doses of freshly made combined influenza vaccine and combined *M. catarrhalis* vaccine. The results obtained were most satisfactory and encouraging. Indeed, in some of the cases, the rapid improvement was nothing short of remarkable. There were no ill effects whatsoever and, even when used in young children, temperatures of 105° and 106° F. came down 4, 5 and 6 degrees in 24 hours. I am convinced that such drops in temperature and so remarkably rapid an improvement in many of the cases would certainly not have occurred, had I not used the vaccines promptly and repeatedly where necessary.

It is to be regretted that this vaccine treatment was not given to more patients and their families, prophylactically as well as therapeutically, during the early part of the epidemic. Many lives might have been saved, much illness prevented, and serious complications avoided.

There is no scientific reason for the use of diphtheria antitoxin in this disease and

as a therapeutic measure it is absolutely worthless except, of course, where diphtheria is complicated with an attack of influenza.

The principle of using the serum of patients who have recovered from influenzal pneumonia is rational, and its use has been followed with satisfactory results.

McGuire and Redden have reported the results of the use of such *convalescent human serum* in the *Journal of the American Medical Association* (Oct. 19, 1918, p. 1311). They state that all of the deaths in the Naval Hospital (Chelsea, Mass.) were due to the pneumonia complication and none to the influenza as such. The mortality varied from 30 to 60 percent.

Flexner and Lewis (*Jour. A. M. A.*, May 28, 1910) and Amoss and Chesney (*Jour. Exper. Med.*, 1917, xxv, 581) reported valuable and encouraging evidence in the use of convalescent serum from poliomyelitis patients in the treatment of anterior poliomyelitis and it was, therefore, thought advisable by Redden to use the serum of convalescent influenza-pneumonia patients as a curative measure, because of probable antibody content. Out of about 40 patients thus treated, only one died. They used 75 to 125 mils of the serum intravenously. The convalescent serum was obtained within a week after the temperature had dropped to normal. The majority of the patients received a total of about 300 mils. The improvement was noticed in the first 24 hours after its use. Of course, Wassermann tests and compatibility tests of the donors' sera with the recipients' corpuscles were made as soon as new cases appeared in the ward. Further study as to the potency of convalescent serum is advisable.

Intravenous injections of hexamethylenamine were used by Loeper and Grosdier in doses of 1.5 to 2 Gm. (*Bull. Soc. Méd. des Hôp. Paris*, May 31, 1918, xiii., No. 19.) It is harmless, according to these men, and, of 15 pneumonia patients, all were improved and cured; in 5 cases the disease was aborted, defervescence occurring the following day. It would seem to me, however, that the frequent presence of albumin and casts in the urine of these influenza-pneumonia patients, would surely contraindicate the free use of urotropin. I did use, at the beginning of the attack, a capsule called by me "Urotropin Comp.

Capsules" and consisting of phenacetin grs. 1½; acetylsalicylic acid, grs. 3, and urotropin grs. 3—one being taken every two hours. This relieved the pain and aching. Where the kidneys were affected or where the patients were not seen early in the attack, the urotropin was not used.

Another favorite prescription I used was, caffeine citrate, grs. 2; cinchonidine sulphate: grs. 2 to 3; and acetylsalicylic acid, grs. 3 to 5.

I did not use quinine sulphate, quinine and urea hydrochloride, nor Dover's powder, nor a great many other drugs employed by many physicians. I used small doses only, of aspirin, phenacetin, urotropin, and other pain alleviating preparations—these were stopped at the end of 36 to 48 hours, or sooner if the patient felt relieved. For the cough, I found nothing better than codeine, in doses of gr. ¼ to ½, and citrate of sodium or citrate of potassium in doses of grs. 5 to 10, every two hours. Mistura glycyrrhizae composita was used occasionally, however, the tartar emetic contained in this preparation is depressant and this must not be forgotten, especially in our weak, enfeebled sweating patients. My patients received tincture of nux vomica in fairly large doses or strychnine sulphate in doses of gr. 1/20 to 1/30, frequently repeated. Digitalis did not seem to act so well, and failed utterly in some of my urgent, seriously sick cases. Digipuratum was the digitalis preparation mostly used and, in a few cases, seemed to help over the crises, where the ordinary tinctures failed.

Weaver, of New Orleans, says that, in an adult, 40 to 60 grs. of citrate of sodium, every three hours, should be continued day and night until the lungs are entirely cleared. He states further that if the citrate is discontinued before complete resolution, there will be an immediate relapse. He has treated 36 cases of pneumonia with this method thus far, and the rapid recovery has resulted in each instance. (*New Orleans Med. & Surg. Jour.*, Oct., 1918.) In cases of relapse, recovery again occurs under the influence of the citrate. This, in his opinion, is absolutely proof that the citrate is responsible for the recovery by lysis.

Drs. Brown and Sweet, of El Paso, Texas, report the use of whole citrated blood in the treatment of influenza pneu-

monia. They think that the corpuscles are also valuable as probably containing some of the antibodies and they have, therefore, used citrated-blood transfusion. (*Jour. A. M. A.*, Nov. 9, 1918.)

Dr. F. J. Kalteyer recommends the use of stimulating remedies, in an anticipatory manner. He prefers digalen. Some physicians used camphor in oil hypodermically in the cyanosed patients, along with oxygen. I doubt whether either one of these measures does much good in the cyanosis occurring in this epidemic-pandemic disease.

Dobbyn advises applying ice-bags to axilla, neck, groin (over Scarpa's triangle), and popliteal spaces where the great blood vessels are subcutaneous or nearly so—a reduction of 3° may be obtained in ¼ of an hour.

Dr. Boston treated all his cases as cases of acute nephritis. Some physicians gave very little in the way of drugs. Dr. M. H. Fussell thinks he got just as good results with rest in bed, fresh air, and plenty of good nourishing food, provided these patients went to bed immediately on the very first appearance of the slightest symptoms, such as, coryza, or headache, or chilliness, or cough. He tried this with the nurses of a large hospital.

However, in general practice, we always found our patients very sick when we were called in, and treatment was necessary and urgent in many of the cases. The expectant watchful treatment would have failed utterly in the large majority of the cases of epidemic influenza-pneumonitis.

Nearly all my patients received the alkaline treatment, consisting of citrate of sodium and citrate of potassium by mouth, and bicarbonate of sodium and saline solution by rectum. The bowels were kept open by administration of mild salines or fractional doses of calomel with bicarbonate of soda. Rest in bed, of course, was the first and most important treatment insisted upon by me. The patient was kept in bed, where possible, for several days after the temperature dropped to normal. I believe that, if it had been possible to keep all the patients in bed for five or six days after complete recovery, and if these same patients had taken to bed immediately on the first appearance of the symptoms of the disease, the mortality and incidentally the morbidity rates, would have

been far lower and complications much less numerous and severe. Some of the patients had marked delirium and symptoms of meningismus. I would suggest in very severe cases of complicating meningism the use of lumbar puncture. This would promptly relieve the symptoms, as reported sometime ago by Dr. Musser in the use of spinal puncture in cases of pneumonia.

It seemed that very little treatment was necessary, comparatively speaking, in cases occurring among negroes. They recovered in a large proportion of the cases. The incidence of the disease seemed much less in the negro race and the disease was certainly not so severe and so fatal in the dark-complexioned people as in those of lighter color, the blond.

Convalescence

A liberal diet should be given. For the cough, which may hang on, I found syrup of hydriodic acid (fresh) in teaspoonful doses very useful. This may be given every three hours in milk or water. If the cough is painful and distressing, a capsule containing small doses of dionin, heroin, or codeine with grs. 2 1-2 to 3 each of guaiacol carbonate and terpin hydrate, is very useful. For the anemia, wine of citrate of iron, vinum ferri amarum, or vinum ferri et ammonii citratis or "vinum ferri" may be used.

A pill or capsule containing cinchonidine sulphate, grs. 1 to 2; ext. gentian, gr. 1; ext. nucis vom. gr. 1-8 to 1-4, ferri sulphatis (exsicc.) grs. 3 may be given 3 or 4 times daily after meals, or, elixir of iron, quinine, and strychnine may be ordered.

Ordinarily, very little medication is necessary or indicated during the convalescent period. Food, air and sunlight and rest do the work.

Summary and Conclusions

To summarize, (1) The exact cause of this epidemic disease and its complications, is not known. It is probably due to a severe malignant infection, mixed in character, with virulent strains of several well-known microorganisms. (2) Mixed bacterial vaccines have proven their worth as a prophylactic measure and deserve further trial. (3) Bacterial vaccines have been of great help in the treatment of the disease and its complications. Although not so scientific as a specific anti-serum or antitoxin, and probably not so efficient, yet, since we are not fortunate

enough to have such antitoxin, we are justified in continuing the use of mixed or combined vaccine (or serobacterins) as a therapeutic measure in view of the numerous encouraging reports from everywhere. (4) A multiplicity of remedies was useless and of very little benefit. Good food, fresh air and rest in bed were highly important. I did not starve any of my patients. They all received plenty of good wholesome light nourishing food. (5) Antipneumococcic serum (type I) certainly is indicated in undoubtedly complicated cases of lobar pneumonia occurring in this epidemic, especially if due to the Type-I Pneumococcus, but should be used before the type of the infection is reported by the laboratory, as any delay may prove fatal. (6) The chief drug treatment in my cases consisted of giving a combination of aspirin with or without caffeine citrate and cinchonidine sulphate and fairly large doses of strychnine. Codeine, with or without citrate of potassium or sodium, for the cough. (7) The entire treatment, as a whole, in my mind, should be based chiefly to accomplish two ends: (a) The alleviation of the pains, cough, insomnia, and other discomforting symptoms during the first two or three days of the disease; (b) The treatment of the severe toxemia by sweating at the very beginning of the disease, by the use of hot drinks, with or without whisky, hot external applications, vapor bath, together with an ice-cap to the head, and the above-mentioned "urotropin comp. capsule"; opening of the bowels, and flushing them out by enemata, and plenty of water to drink with the addition of orange juice, lemonade, and milk, etc., thus mildly stimulating the kidneys to action. The acidosis element in this severe infection is counteracted by the use of the bicarbonate-of-sodium enemata, and enteroclysis, and the administration of the citrate of potash or citrate of soda, with or without liquor ammonii acetatis, which was given also to alleviate the cough as above mentioned. (8) Isolation and quarantine of houses in which sufferers of the disease are confined would probably be more efficient than the widespread "bans" issued by Boards of Health. These latter tend to scare and frighten the populace unnecessarily, cause great inconvenience, dissatisfaction, and are highly questionable as an efficient measure.

The Treatment of Chronic Diseases

Diseases of the Nervous System

By GEORGE F. BUTLER, M. D., Wilmette, Illinois

Medical Director, The North Shore Health Resort, Winnetka, Illinois.

[Continued from November, issue, page 833.]

Migraine

THE vast majority of headaches of an intense character and which are loosely classed as migraine are, really, of toxic or anemic origin and, therefore, do not properly belong in the realm of nervous disorders. There is, however, a small proportion among them that constitute genuine neurovascular phenomena, consisting, as they do, in a spasmotic contracture of the vessels that supply the brain and thus cause an artificial and temporary anemia that manifests itself as a very intense headache. These headaches mostly are limited to one side of the head (hemicrania).

Theroretically, of course, we ought to be able to relieve these headaches quite simply by the administration of some quick and powerful dilator of the arteries, of vasomotors, such as nitroglycerin, or one of the nitrite salts, or atropine in tiny doses. Unfortunately, however, it seems that when once one of these neurotic spasms has established itself, it defies all therapeutic efforts at unlocking, and ordinarily persists until released by a natural process of reaction similar to the process that brought it about. Not infrequently these patients are relieved of their headache quite suddenly and completely by the occurrence of some unexpected and powerful distraction of their attention.

If we can catch the headache in its threatening stages, and the patient can be persuaded to take vigorous action against it, then, instead of trying to "fight it off," it is usually a very easy matter to head it off by the means just indicated, namely, by reducing the blood tension and quieting the nervous system with moderate doses of sodium nitrite or acetanilid and monobromated camphor, in combination with a mild alkaline—the bicarbonate of sodium or of potassium. This, coupled with an hour or so of rest in a cool darkened room or else a brisk walk in the fresh air, according to the temperament

of the patient, as a rule will ward off an attack; or, a hot bath followed by an hour's seclusion and rest is an excellent prophylactic.

When once the attack has established itself, though, more heroic measures are necessary. The same remedies recommended above may be prescribed, but, they must be given in larger doses and—what is more important, still—they must be given in *hot water* or else immediately followed by a draft of hot water. During the attack, the digestive tract shares in the neurovascular spasm and thus is incapacitated for absorbing anything, unless the spasm first is relieved by flooding the membranes with hot water. Hence if the medicines are simply swallowed at such a time, they remain inert in the stomach and small intestine and, so, have no effect. In administering these remedies, it is my practice to have the patient swallow half a tumblerful of hot water or hot physiologic salt-solution five minutes before taking the medicine and another half-glassful immediately afterward.

Sometimes relief can be obtained by inducing rather violent emesis. Many patients themselves have discovered the efficacy of this procedure, although they do not know its precise reason, and they induce vomiting by tickling the fauces or by swallowing mustard in lukewarm water. The general idea is, that this helps by removing from the stomach irritating contents. This, however, is not the explanation. It is the act of vomiting that brings about a relaxation of the entire vasomotor mechanism and, therefore, relieves the neurovascular spasm. Consequently, mere gavage will not serve this purpose; active vomiting must occur.

There are, of course, exceptionally severe cases, in which still more heroic measures must be employed. In such instances, about the only recourse left us is, to compel sleep (which, after all, is the most effective unlocker of such spasms) by means of some powerful hypnotic. But, in

choosing our agent, it is necessary that we avoid those that contract, and must select those that tend to dilate the blood-vessels. Opiates are, for this reason, undesirable. Sulfonal and trional are ideal in such cases, given in doses of 10 to 15 grains in hot water; but, unfortunately, they are not, as a rule, powerful enough in severe attacks. For a more compelling hypnotic, a mixture of sodium bromide and chloral hydrate (of the former, 20 grains, and, of the latter, 10 grains) in hot water is very effective. If the circulatory function of the patient be habitually poor, it is well to give, in addition, a dose of digitalin. This will not interfere with the hypnotic or relaxant action of the other two drugs, but, will guard against collapse.

Neurasthenia

It should be remembered that neurasthenia is, essentially, a chronic malady, that its development often is as rapid as its advent is insidious, and the final recognition of its presence may occur only after weeks or months of its existence and after the entire nervous system has become involved. The individual may have been enjoying normal health for some time. Suddenly he manifests a strange, unwonted disposition, is peevish, a prey to unreasoning fears, loses sleep and appetite, is listless and distracted, perhaps even indifferent in his family-relations, and evidently a victim of secret care. Gradually he realizes the fact that he is not himself, that his nerves are seriously unstrung, and that he requires a change—he is neurasthenic and powerless to cope with the conditions to which he is subject.

Rest, Physical and Mental.—It can not be too strongly impressed upon the sufferer that great benefit can be derived from rest. This regimen may be regulated according to the severity of the case, being relative or absolute in proportion to the requirements indicated. In milder cases, a few hours of extra sleep daily may prove an efficient means of relief.

Only the most careful study of each individual case can rightly determine the precise procedure to be adopted. The difficulty in determining whether the neurasthenic condition or the gastrointestinal disease was the primary condition of any given patient, often is very great and frequently insurmountable; still, from a prac-

tical point of view, this does not seem to be important.

If the gastrointestinal disease is purely neurasthenic in its inception, it soon becomes much more than this in a large number of cases, and it calls for much the same line of treatment, whether it is primary or secondary. Always, though, rest must be considered the essential and rational basis of the line of treatment chosen, everything else being subservient to its beneficent influence.

Bearing in mind always that the particular neurosis under consideration is, largely and often chiefly, psychological, it is impossible to overestimate the reflex importance of rest in its salutary action upon the mind. Perfect relief from bodily fatigue works wonders in effecting general amelioration, although in many instances gentle and well-regulated exercise is of unquestionable value, especially in certain states and in certain stages of recovery. Released from the wearing anxieties that finally have resulted in a neurasthenic condition, the mental faculties of the victim gradually but surely regain their normal strength and elasticity, particularly if the environment is such as to inspire reawakening hope and confidence.

A new life appears to accompany the results of carefully studied and judicious treatment, and in compulsory, yet, grateful repose the patient soon finds that his thoughts are brighter and more cheerful, his capacity for mental enjoyment is keener, and his physique markedly improved under the influence of the general recuperation. Sleep and healthy digestion which have, perhaps, long been strangers to him, assume a natural phase; troubles which but lately oppressed the mind with persistent anxiety appear purely imaginary or at least are deprived of their baneful effect, while the entire system responds favorably to the new regimen and watchful care.

The records of this treatment abound in illustrations of its beneficent agency in restoring normal conditions. It is emphasized strongly here as of unique, paramount, importance, in which experience leads me to place almost implicit faith. Change of scene and recreation often is more important than mere physical rest.

Hydrotherapy, in the opinion of the most-competent authorities, is an inval-

able ally in dealing with neurasthenia. It even has been asserted that there is probably no chronic disease in which its application contributes more largely to the betterment of the patient's condition and which renders the beneficial effects of a changed environment, the removal of etiologic factors, of proper diet, electricity, and medication more pronounced and enduring.

Nearly half a century ago, Preiss wrote: "Prolonged continuance of anomalies of the nervous system not rarely deranges important functions. Since all function depends upon nerve action and no other remedy is capable of altering the nervous system in a mild manner so rapidly, surely, easily, and thoroughly as water, this simple remedy must occupy the first rank as a nerve tonic." Other eminent writers have similarly endorsed the value of hydrotherapy and balneotherapy in neurasthenia; Jolly recommending the imbibition of large quantities of water as an aid to renal and peristaltic action, its external application being valuable in those cases in which increased excitability is combined with tendency to exhaustion.

One hardly can overestimate the efficacy of cold rubs, half and full baths, with friction, of douches, sprays, and so forth, in their favorable influence upon the cutaneous tissues and upon the circulation and tone of the vessels. Krafft-Ebing asserts that "in the management of neurasthenia the water-treatment is of the greatest value, because, as applied (preferably in institutions), it admits of all possible excitant, calming, and alterative effects upon the diseased organism and its tissue changes." He considers hydrotherapy important in reducing insomnia, while in pronounced neurasthenia he regards it as a valuable aid in regulating cardiac activity, dilating the peripheral vessels and increasing or diminishing (as desirable) the cerebral circulation.

Various hydriatic measures may be adopted, all of them more or less efficacious, according to the conditions in which they are applied. Klemperer is authority for the assertion, amply corroborated by experience, that "in hydrotherapeutic efforts we observe quite an extraordinary and incomparable stimulation of the nervous system, which is reflected upon the various organs." Dr. William N. Draper, speaking of this procedure, remarks: "It

seems to be more effective than any treatment by medicine in stimulating the nerve-centers, in restoring the equilibrium of the circulation and reviving the activity of the organic functions," adding forcibly that "its best results require the appurtenances of a well-ordered establishment, where all the various methods of applying water can be wisely and skilfully directed."

Many like testimonials might be adduced to show that in the water-treatment there resides a veritable means of restoration. "Who can calculate," says Dr. Frederick Peterson, "to what degree we may thus influence the biochemical processes of the body, the metabolism of tissues, the carrying off of degenerated and toxic substances, or determine how much we may affect the vascular neuroses, the local anemias, and the hyperemias of the brain and spinal cord?"

Electrotherapy.—With regard to electricity, especially the static form, its use in the treatment of local neurasthenic symptoms—such as morbid cephalic sensations, extreme intestinal atony, weakness of the sexual organs, etc., is generally conceded. In these conditions both faradism and galvanism, combined or alternated, have proved beneficial. Much depends upon the constant application of this subtle force. So far as experiment has shown, its curative property in certain cases seems undeniable, while, as a therapeutic agent in obstinate neuroses, it is inferior to rest and hydrotherapy.

Drug-treatment.—The treatment of neurasthenia is marred by the usual quackeries that fix upon a single symptom as the disease. The drugs generally prescribed for their tonic effect are, as Bremer observes, nux vomica or its alkaloids, arsenic, phosphorus, quinine, bromides, iron, hypophosphites, and a few others. None of these remedies will cure; iron is particularly objectionable, since, as a rule, it is not well borne by the neurasthenic. Quinine often is administered in excessive doses for the erroneously assumed complication of malarial infection.

There is no drug (and I say this after careful and long observation) that can restore or create nerve-strength and brain-vigor, as is so often claimed by proprietary-medicine men. The majority of the much-advertised nerve-tonics are not worth a trial; still, these articles are in great

vogue, owing to recommendations of sadly mistaken physicians in good standing. The thousands of barrels of so-called "nerve-tonics" taken annually mean misery to untold numbers of neurasthenics and their families, since such patients, when poor, consider it of greater importance to buy their "nerve-tonics" at the rate of \$1.00 a bottle, than to provide necessities for the family.

Physical Exercise. — Complicating the drug-prescription errors there are the errors involving exercise and diet. One of the commonest and most-disastrous prescriptions of this kind given to the neurasthenic, as Bremer properly says, is, to "take plenty of fresh air and exercise." The "fresh" part of the injunction is all right (in some sanitaria, such patients often are compelled to be in the open air all day, even though in bed and when too weak to move about or sit up), but, the prescribing of "exercise" is all wrong. There is a widespread delusion that exercise is beneficial under all circumstances. The acme is reached when the gymnasium and athletics are recommended to every neurasthenic. Many athletics and prize-fighters become neurasthenics by dint of too much muscular exercise. Even in laboring men that have heavy work to perform nervous prostration often results.

Whenever and as often as a muscle is contracted, certain brain-cells enter into activity. The brain in one or more of its parts is, in neurasthenics, the most easily irritated and exhausted. Going to the close functional dependence and interdependence of all parts of the brain, work

of the motor-region governing muscle contraction during exercise must affect other weakened and easily irritable parts. Some cerebrasthenics whose slightest mental effort is followed by brain-fag can walk long distances without feeling any fatigue, but, this often is an expression of overfatigue.

The Diet is an important factor, but, like other measures, this also is badly abused. Neurasthenics not seldom are advised to eat plenty of nourishing food; and they will gorge themselves, without considering that it is not the amount of nutriment—even when properly digested and absorbed—that determines nutrition, but, the use to which the digested food can be put in the tissues.

The artificial foods have the effect of weakening the stomach by rendering it, so to speak, apathetic, thus interfering with the churning of the food and the secretion of gastric juice. One ounce of butter with bread digested naturally outweighs a pound of beef incorporated in the system under artificial conditions. Beef-extracts are especially objectionable for neurasthenics. Milk and fresh fruit often disagree with these patients. Dietetics, therefore, should be a matter of individual prescription rather than of any general directions. Excess of the proteids and excess of the starches and sugars are to be avoided, since these two excesses, acting in a vicious circle, aggravate each other. Starchy food fermenting in the intestine favors absorption of proteid products of decomposition.

[*To be continued.*]

AN AMERICAN CREED

I BELIEVE in the United States of America as a government of the people, by the people, for the people; whose just powers are derived from the consent of the governed; a democracy in a republic; a sovereign nation of many sovereign states; a perfect union, one and inseparable, established upon those principles of freedom, equality, justice and humanity for which American patriots sacrificed their lives and fortunes. I therefore believe it is my duty to my country to love it; to support its Constitution; to obey its laws; to respect its flag, and to defend it against all enemies."

What Others are Doing

INTRAVENOUS MEDICATION IN SYPHILIS

The discovery of salvarsan, some years ago, constitutes an important advance in the treatment of syphilis and other protozoal diseases, not so much through providing a definite or new remedy, but, rather, because it inaugurated the intensive administration of drugs known to be of service in these diseases by the intravenous route.

As a means of producing a complete sterilization of the organism, as to protozoa, salvarsan soon was found to be ineffective. It proved, however, to be of superior value for the purpose of introducing into the circulation a large amount of an arsenical compound; and, under methods combining mercury and iodine with the salvarsan treatment, truly splendid clinical results were obtained.

In an article contributed to *The Practitioner* for October, Mr. R. L. Spittel asserts that a comparison between salvarsan and mercury and the iodides has not been a fair one hitherto for the reason that the older drugs have not been administered in the same massive doses and by the intravenous route as was the case with arsphenamine. Keeping this in mind and being conscious of the remarkable powers of iodides in causing the absorption of syphilitic growths, as also of the curative action of mercury upon indurations of chancres and lymphatic glands, Mr. Spittel devoted his attention to these two drugs when, soon after the outbreak of the war, it became evident that supplies of arsphenamine would be increasingly difficult to procure.

Experience had shown that all syphilitic lesions react better to a combination of mercury and iodide than to one or the other alone, and the author soon was convinced that the drugs contained in Donovan's solution lent themselves to a form of treatment by which these remedies were pushed to the point of tolerance under ad-

ministration by the intravenous route. He elaborated a solution for intravenous injection which, given in an appropriate manner, produces effects on syphilitic lesions, whatever their stage, that are little short of those obtained with salvarsan. This conclusion is reached after three and one-half years' experience, during which the author has administered over five thousand of these injections.

MERCURY AND IODINE INTRAVENOUSLY IN SYPHILIS

The solution of mercury and iodine compounds mentioned in the foregoing abstract, and which Spittel (*loc. cit.*) uses as a routine treatment for intravenous administration, is as follows:

Mercuric iodide	grs. 50
Arsenious iodide	grs. 40
Sodium (or potassium) iodide,....drs. 8	
Aqua destillata	ozs. 40

The solution is made up in the following way: It has to be rendered slightly alkaline, and this is best done by first adding to it 20 minims (1 mil) of a 0.5-percent solution of phenolphthalein, and then neutralizing by carefully adding drops of a 25 percent solution of sodium hydrate (about 2 drachms are required). When alkalinity is reached, the solution begins to assume a pink color owing to the presence of phenolphthalein which, thus, serves both as an index of correct alkalinity and as a coloring agent. Once the neutral point is reached, the alkali is cautiously added drop by drop until a distinct pink color is obtained. If thought necessary, glazed litmus paper may be used as a control of alkalinity, but, phenolphthalein is by far the more delicate index. It is important that the solution should be only slightly alkaline; if too alkaline, a precipitate results either immediately or after some hours or days, and the efficiency of the solution is impaired. Should the color fade on keeping, it means that it has become too acid (due probably to the presence of hydriodic acid); in which

case dilute alkalis should be added until the original pink color returns. The solution keeps well for several weeks, and, if stored in a glass-stoppered bottle under aseptic precautions, it may be drawn upon for injection without subsequent resterilization.

As to dosage and mode of administration, 8 to 15 mils is the dose for an adult. The dose should be small to begin with and gradually increased according to tolerance. Four to six injections at intervals of four days to a week constitute a course. Several such courses should be given with intervals of a month or six weeks between them.

The injection is administered with a 20- or 30-mil glass syringe, into which the required quantity of solution is drawn; the syringe is then filled up to its full capacity with sterile water. This further dilution is necessary to obviate the slight phlebitis that otherwise is apt to ensue, rendering future injections into the same vein somewhat difficult. The solution is introduced into the vein after the usual manner of intravenous injection; should any of it escape into the tissues outside the vein, pain, tenderness and induration are caused.

Results.—There is no lesion of syphilis that is not markedly and rapidly benefited by the injection. One dose is often sufficient to cause the disappearance of recent lesions. The primary sore heals rapidly, leaving little induration behind. The lesions of secondary syphilis quickly disappear as well as such symptoms as headache, osteoscopic pain, and others. Cutaneous syphilitides of all kinds, mucous papules, snail-track ulcers, et cetera, get well after one or two injections. Tertiary lesions such as gummata, ulcers, nodes, improve with remarkable rapidity; so do joint-pains, headaches, bone-pains, and recent eye affections such as irido-cyclitis and keratitis. A constant feature of these injections is, the inflammatory reaction (Herxheimer) that follows them. Any lesion, whether it be the primary sore, the cutaneous syphilitide, the node, or the inflammation of the eye, becomes more painful and inflamed some hours after the injection before becoming painless and subsiding.

The author concludes that, although the claim is not made that these injections should replace salvarsan and its derivatives but, rather, reinforce them, still, when the latter are difficult to procure, or

can not be afforded by the patient, the injections here advocated are sufficient of themselves to bring about a cure.

IPECAC IN THE TREATMENT OF AURICULAR DISEASES

There is hardly any drug more frequently prescribed than ipecacuanha, although physicians are not really conscious of how often they do use it. Thus, it constitutes an essential ingredient of the rhubarb, ipecac, and soda combination that is the standard remedy for all undefined functional stomach disorders presenting themselves in the clinics of New York City. It is used in the form of Dover's powder, because physicians know that this is a remedy that gives relief under varying circumstances.

So, in the treatment of cardiac conditions, ipecac has, naturally, been employed in this way as an adjunct, while it also has been given by many as an emetic, with the idea of terminating attacks of palpitation of the heart. Of course, the belief has been that the effect upon the auricular functional disorders was purely reflex.

In *The Medical Record* for August 31, Dr. Louis Faugeres Bishop, records the observation that, in disorders of the auricle, which he believes are very often of toxic origin, ipecac seems to be a valuable adjunct to digitalis. In people that are suffering from fibrillation of the auricle, severe attacks of cardiac distress may occur, in which treatment must be pushed to a degree that it is to be considered as bold. Doctor Bishop often has felt obliged in such cases to order digitalis given until vomiting has been produced. However, on one occasion, when he was afraid that when the vomiting by digitalis came on it might do harm, he combined some ipecac with the digitalis, in order to increase the nauseating effect of the latter. This was indicated, especially since digitalis-nausea may be postponed too long to be of value. On this particular occasion, the response to the treatment was unusually favorable, so that Doctor Bishop has been led to repeat the combination of ipecac with digitalis. Although it does not always hasten nausea, yet, he is under the impression that the effect of the digitalis seems to be improved.

We desire to add to the foregoing that it is owing to the rather slow action of

digitalis and to the necessity of securing quick results in certain heart crises that remedies have long been demanded, the action of which might be secured more rapidly than is the case with the galenical digitalis preparations and also with the more modern products. It is for this reason that the chemically pure digitalin and certain other digitalis products (for instance, the one known as digipoten) are being injected intravenously by many clinicians, and with most remarkable and pleasing results. In this mode of procedure, it manifestly is impossible to add ipecac to the digitalis, while the addition of emetine hydrochloride is entirely feasible, even for intravenous injection. In any event, the desired action of ipecac can be secured much more promptly and energetically from the alkaloid, and it is somewhat of a matter of surprise that so many physicians do not see fit to employ the alkaloid in place of the crude drug.

INTRAMUSCULAR INJECTION OF CINCHONINE SALTS IN MALARIA

Sir Leonard Rogers, who is one of the greatest authorities in the world on tropical diseases, contributes to the October 26 number of *The British Medical Journal* a very interesting article, in which he suggests the use, intramuscularly, of cinchonine salts, instead of the quinine salts. Introduced intravenously in large doses, quinine is not free from danger. Cinchonine, on the other hand, is less toxic, while it has the very decided advantage that it can be administered intramuscularly and subcutaneously without causing notable pain. Moreover, it is much more readily absorbed when injected intramuscularly than are the quinine salts. Cinchonism is produced by cinchonine in 15-grain doses in one or two hours, and the alkaloid soon appears in the urine in the form of quinine. This, Rogers has demonstrated by experiments with rabbits.

Comparative experiments with quinine bihydrochloride and cinchonine bihydrochloride injected into the muscle showed that, when the former was employed, 80 milligrams remained in the muscle unabsorbed after twelve hours, while 30 milligrams were absorbed and found in the vital organs—the brain, kidneys, liver, spleen, and adrenals. When cinchonine hydro-

chloride was injected, 40 milligrams remained in the muscle unabsorbed, while 85 milligrams was absorbed, as shown by its presence in the organs named. Thus, his experiments demonstrated that a much larger percentage of the cinchonine hydrochloride was absorbed after seventy-two hours than of the corresponding quinine salt.

The clinical effect upon the animals was even more striking; for, while the animals injected with quinine salts appeared to suffer from no definite symptoms of poisoning, the cinchonized animals became violently convulsed within half an hour after the injection.

A series of experiments tried out with cinchonine, as compared with quinine injections, in malarial patients suffering from the disease in more or less severe form showed up equally favorably.

As a result of these experiments, Sir Leonard concludes that cinchonine bihydrochloride in a 1 : 2 solution carefully sterilized is so rapidly absorbed when given intramuscularly that he considers it nearly as effective in its action in severe malarias as quinine intravenously, while it has the advantage of being much safer and capable of administration practically without pain.

In severe cases of malaria, as well as in patients who vomit when quinine is administered by the mouth, he suggests a trial of intramuscular injections of from 7 1/2 to 15 grains of cinchonine bihydrochloride during the first few days of the attack, for the purpose of controlling the fever and infection, following with full doses of quinine by mouth, to prevent relapses.

IN THE FIELD HOSPITAL

Elizabeth Fraser gives, in *The Saturday Evening Post*, a striking picture of the doctor's work in an evacuation-hospital.

An evacuation-hospital, says the writer, is dramatic, picturesque, full of potentialities and surprises, with tragedy, comedy, and broad farce competing for first place every hour in the day.

Here, during a big offensive, when Allied and enemy wounded are pouring in in a continuous stream, surgeons, nurses, and personnel work like fiends under a tremendous pressure, twelve, twenty-four, even forty-eight hours at a stretch. Here, there can be witnessed in the operating-room running fights with death as tense

and thrilling as anything upon the battlefield. Sometimes the wounded man is exactly upon the great divide, hovering between life and death, an extra hair's weight capable of sending him to either side; sharpnel in his chest, his lungs full of blood, breathing like a trumpeter, suffering from shock, exhaustion, lack of food—and still able to smile up into the surgeon's eyes and say faintly: "I'm all right, sir. Take that other poor guy. He's worse off than me."

In cases, like these, three minutes more or less in the duration of the operation spells all the difference between time and eternity. The surgical team works with the perfect union of a football eleven. In their white apron, caps, and masks, they look like priests performing a rite. The sweat stands out on their foreheads. Their expert fingers move like lightning, yet, precise, un hurried, sure.

In an operation of this kind, with life and death in the saddle and both riding hard, I have seen the assistant hold a watch on the operating team, as if it were a horse-race, and call aloud the minutes, thus: "Three! Five! Seven! Ten!" Two minutes too long, and the patient may expire on the table or die of pneumonia from the added strain of ether on the lungs. Here, margins are short and time is more precious than the weight of iron in rubies.

STROPHANTHUS IN PNEUMONIA

Maj. D. Elliott Dickson reports, in the October 19 number of *The British Medical Journal*, a series of 67 cases of pneumonia, with only 2 deaths. These cases were treated in the general military hospital in France to which Major Dickson was attached. The mortality in the hospital area for the same period, including his own cases, was 12.25, in comparison with which the mortality of 3 percent in his cases is remarkably favorable.

The treatment employed consisted in keeping the patient absolutely at rest. He was not, under any circumstances, allowed to sit up, while the examinations of the chest were limited in number to the irreducible minimum. The novel feature of the treatment consists in the use of strophanthus from the moment the diagnosis has been made, given in doses sufficient to keep the pulse as satisfactory as possible. It is given in the very beginning of the

illness and is used as a prophylactic rather than as a curative remedy; the idea being to get the drug into the system to antidote the pneumotoxin.

Major Dickson begins with 5 minims of the tincture of the new British Pharmacopeia, repeated every four hours. (The tincture of strophanthus, B. P., edition 1914, is of the same strength as the official U. S. P. tincture; but, is four times as strong as the corresponding preparation of the British Pharmacopeia of 1898.) If the frequency of the pulse increases to 120 per minute or more, he gives the same dose every two hours, or even hourly, if necessary. Two minims of tincture of capsicum is given with each dose, to guard against any digestive disturbance. Small doses of heroin were prescribed, to control cough, while cold sponging was resorted to whenever the temperature rose above 104 degrees.

PROPHYLACTIC VALUE OF QUININE

In an article published in the October 26 number of *The British Medical Journal*, serious doubt is thrown upon the value of the internal use of quinine, for preventing malaria, by G. Waugh Scott, a physician employed on a rubber-plantation in the Malay States.

The laborers on this plantation were divided into two groups, the first group consisting of tappers—strong men who do comparatively easy work—the other group being weavers, who have longer hours and do more work. Those of the first group were daily given 10 grains of quinine at a single dose, as a prophylactic. In spite of this, there actually was a lower percentage of malaria-cases among the weavers, who had received no quinine whatever. This, even though they worked longer and were physically of a lower type.

THE WOUNDED "YANK"

In Elizabeth Fraser's article, published in *The Saturday Evening Post*, we are given a moving picture of what happens to the soldier from the time he is wounded until he is lifted from the operating-table in the evacuation-hospital—and here it is:

"A soldier is wounded on the field, in the trenches, in a wood. If alone, he applies his own first aid. If he has given it

away to a comrade, he uses his belt for a tourniquet, his bootlaces—anything. If he can not get at his wound or if he is knocked unconscious, he lies until he is picked up by a friend or foe. If he is not picked up, he 'goes west,' joining the great host of immortal comrades, and all is well. That is the first step, where each individual attends to himself, is attended to by others or is lost.

"The second step consists in getting him to a dressing-station, usually in some abri, where he is bandaged, given a hot drink and an injection of antitetanus serum, and an iodine cross is marked on his forehead to indicate that he has received the same. If he is suffering acutely, he is, in addition, given a morphine tablet. After this, he is transported by ambulance to the divisional field hospital, where, if he is in good condition, he is not even unloaded, but, sent straight on to the evacuation-hospital a few miles farther back.

"Thus, he receives personal, regimental, and divisional first aid before ever he strikes the evacuation-hospital. All of which, if he is lucky, he may get inside of two or three hours and be safely tucked away in his cot, coming out from under the ether, raving, not of home and mother, but, of going 'over the top', shouting in stentorian accents: 'Shoot 'em to hell, boys! The dirty skunks! Shoot 'em to hell!' To the infinite delight of his comrades in the tent ward, who cheer him on: 'That's the stuff, buddy! Atta-boy! Eat 'em alive!'

"Finally, after much batting of wobbly eyelids, he opens his eyes feebly upon the white-capped nurse at the foot of the bed and murmurs in weak, flat tones of pleasure: 'Well, hello, chicken! How'd you ever git here? Gosh! That's a foul taste in my mouth. Say, can a guy spit in this place?' And if he thus far has come through alive, the chances are that he will stick. He is the stuff that survives."

PSYCHOLOGICAL HANDLING OF TUBERCULOSIS

Charles L. Minor, of Asheville, North Carolina, discusses the psychological handling of the tuberculous patient in the *American Review of Tuberculosis* for October. In no disease is the relation between mind and body so close and so important as in pulmonary tuberculosis.

This fact must be recognized as an important factor both for prognosis and treatment, and the complete confidence of the patient obtained. A proper personal atmosphere is important for the welfare of the patient and is often better obtained in an institution than in the home, especially in a cottage sanatorium where a group of patients, socially and financially compatible, are all educated to a proper attitude toward each other and toward themselves. It is essential that the patient be seen for proper psychic treatment as well as supervision. At first, twice a week, and after thorough acquaintance is established, once a week, should be enough. When office visits become feasible a fifteen minute interview twice a week and an hour for physical examination once a month is sufficient. The study of the mental side of the case will become so fascinating that the handling of the case becomes a pleasure rather than a task.

The tuberculous are by no means always or even often abnormal, as has been implied by some writers, though there is a good deal of neurasthenia and hysteria among them and they are apt to have a rather labile temperament. When one considers the terrifying effect, for a person, ignorant of the real nature of tuberculosis, of first learning that he is suffering from this disease, it is no great wonder that it causes a fearful upset of his mental poise and easily produces in any but the most phlegmatic or the most self-controlled a temporary neurasthenia. There is no such school of character as tuberculosis bravely met and rightly faced. No doctor could want a more splendid work than to have a part in teaching these patients to master the bitter sorrow of sickness. He must be hopeful in order to inculcate hope. While there are many that cannot be saved, there also are many who can be restored to working efficiency for long periods or for good, and even in the long drawnout chronic cases life can be made useful and filled with interests and happiness if the patients are but taught to face it aright. A foolish optimism which refuses to see the truth is a miserable thing, that only doubles the sorrow of the patient when he comes to a realization of the facts. But, a wise optimism can yet give him hope and a power to fight whose value cannot be overestimated in its effects on the success of our physical efforts. Finally, the

physician's endeavors should be directed not merely to curing the curable patients but to heartening the apparently hopeless ones to fight to the end.

ARTIFICIAL PNEUMOTHORAX AND PREGNANCY

S. A. Slater, Oil City, Pennsylvania, reports a case of pneumothorax treatment during pregnancy in the October number of the *American Review of Tuberculosis*. The woman had always been healthy except for the present illness, tuberculosis. Married in 1905, at eighteen, she had had two healthy children and two miscarriages. In 1908 she had a hemorrhage and in September, 1913, she entered the sanatorium with symptoms of rather active tuberculosis with profuse expectoration containing bacilli. The whole right lung was involved in the active tuberculous process, but, pneumothorax treatment was not attempted because of scattered active lesions on the left side. She stayed in bed, gradually losing ground until March 27th, 1914, when she had two hemorrhages. The lung now was collapsed and all bleeding was immediately controlled. After a second injection, three days later, the sputum cleared up completely and the temperature dropped to normal and remained so. August 29th, 1915, she was discharged free of symptoms and weighing more than ever before, and has been doing her own housework, returning for a refill every four weeks. A year after leaving the sanatorium, she had a three months' abortion without untoward results. On October 22nd, 1917, she passed through a normal labor giving birth to a well developed child of $7\frac{1}{2}$ lbs. which was immediately removed from the mother. Pneumothorax treatment had been continued through the pregnancy and after delivery, the whole period of treatment extending over four years, the sixty-eighth injection having been given a few days before the present report. Both mother and child have done remarkably well. In weighing the indications for the continuation of the pneumothorax during the last pregnancy, it was felt that the earlier miscarriages could not be attributed to this treatment since two had occurred before

the admission to the sanatorium. There was no more inconvenience after taking gas during the pregnancy than at any other time. While it is evident that it is possible to carry out the treatment with benefit to both mother and child, each case of pregnancy should be considered individually. The complication of pregnancy is not in itself an indication for discontinuing the treatment.

THE INFLUENCE OF PSYCHIC ACTS

Tohru Ishagami of Osaka, Hamadera, Japan, discusses the influences of psychic acts on the progress of pulmonary tuberculosis in the October number of the *American Review of Tuberculosis*. A variety of clinical observations were made with the following conclusions:

1. Psychic acts frequently influence the course of pulmonary tuberculosis unfavorably and render the treatment difficult.
2. Psychic acts often cause transient glycosuria.
3. The psychic influences upon the disease are accompanied by a lowering of the opsonic index.
4. Sugar and adreualin both inhibit opsonic reaction.
5. Lowering of the opsonic index in emotional excitement is caused by an increase in the amount of sugar and adrenalin in the blood.
6. Impairment in the progress of the disease is caused both by a decrease in the opsonic reaction and in the digestive function.
7. Overtaxation of the mind of our youths by our unsatisfactory educational system seems to be the cause of the high mortality of young consumptives in our country.
8. The high mortality of our youths from tuberculosis is also partly due to the infection from tuberculous teachers, who in turn are the victims of excessive mental strain.
9. Prevention of excessive mental strain by an improvement in our educational system is one effective means of preventing the spread of consumption among our youths.



Miscellaneous Articles

Studies on Food Economics

Concerning Low-Protein Requirements

THE following note appeared in the September last number of "Science."

The Need for Nutrition Officers in Military Camps.—"The Surgeon-General has been authorized to station in each of the larger military camps and cantonments in this country a nutrition-officer, whose duties will be those of an advisor to the camp-commander, the camp-surgeon, and the camp-quartermaster, on all matters relating to the nutritive value of foods.

"There still is need for a considerable number of men well trained in food-chemistry and physiology of nutrition, who can qualify as lieutenants and captains in the Sanitary Corps for this assignment. Upon receiving commissions, these officers will be given training for a period at the Medical Officer's Training Camp, Camp Greenleaf, Fort Oglethorpe, Georgia, and will then be subject to appointment as nutrition-officers or to duty of a similar nature overseas.

"This work has proved to be of signal importance in the interest of proper nutrition of the soldiers and of the economic use of foods both in this country and overseas."

Benjamin Thompson, the Massachusetts prentice boy—afterward Count Rumford of Bavaria and at the present day celebrated as the originator of Rumford's baking powder, known to most housekeepers—feared the army of Bavaria and the poor of Munich a ration in which meat protein was lacking and thus secured better nourishment at less cost than by what formerly they had been fed.

The following article appeared in *The Medical Times* for September last by Charles O'Brien, author of "Food Preparedness for the United States," who said that fear of overstatement of the case led him into error in an article on "Diet Reformation" in *The Medical Times* for

December, 1917, and that he wished to make a correction, as follows:

Potatoes, Fat and Water.—"In telling of the marvelous work in matters of nutrition done by Dr. M. Hindhede, of Copenhagen, a brief reference was made to a test conducted by him on two subjects named Madsen. It was stated in the article that they subsisted for over a year on 'potatoes, margarine, and milk,' meantime doing manual labor. The error was in mentioning 'milk' at all. It should have read 'water'—'potatoes, margarine, and water.'

"To our corn-, wheat-, and meat-fed population, this would sound somewhat unbelievable. It was so much so to one of us, to wit, the author, that he unconsciously mentally corrected the truth and included the old, reliable milk. Water seemed too thin. But, water it was. The error is pointed out by Horace Fletcher, a friend of Doctor Hindhede, who was a party to the experiments, in a letter recently received. Fletcher himself submitted to the test for over nine months and says he felt no ill effects from the restricted and monotonous diet.

"The writer had the pleasure of meeting one of the Madsens in Doctor Hindhede's laboratory at Copenhagen. He is a robust, healthy looking, red-cheeked Dane, a gardener, which trade he plied during the experiment besides working about the laboratory. The test showed that on his meager rations of potatoes, margarine, and water he experienced no material loss in health, strength or endurance.

"It was doubtless as a result of the information gained from this experiment that Doctor Hindhede told the writer that he regarded the potato as coming near being the perfect food, milk excepted; but, deficient in fats. Hence, the addition of

margarine. It is, of course, the diet prescribed in the experiment.

"The test was not made to prove the efficacy of a vegetable diet, however—for, Doctor Hindhede is not a vegetarian—but, to show that the human can be adequately sustained on a low-protein diet. Hindhede's contention convinced us that it is almost impossible to get too little protein, that mankind commonly poisons itself by eating much of the high-protein foods—meat, fish, eggs, etc.—and that 10 percent of protein is the limit. Less than that is better. He contends that, if the high-protein foods are eliminated, there will be found sufficient protein in the low-protein foods to answer all requirements. The average of the latter is something like 7 percent.

"So, do not worry if the Food Administration cuts you down on wheat, et cetera. Butter your spuds and take a drink of water. Chances are you'll feel better, be stronger, and have more endurance. You may not believe it, but, science says 'tis so."

The high price of meat at the present time makes the foregoing information of great value to the average housekeeper. She also will aid the physician to treat with greater success his average patients suffering from malnutrition. The peasants of Ireland largely feed on potatoes and buttermilk, and they maintain healthy and vigorous bodies on such diet.

In a former article, we gave a brief sketch of the work of this Massachusetts apprentice boy and schoolmaster, afterward the British soldier and diplomatist, Colonel Sir Benjamin Thompson, then Colonel of Horse and General Aide-de Camp of the Elector Charles Theodore of Bavaria, then Count Rumford of present baking-powder fame. The greatest merit of this versatile man was, his demonstration of food values and scientific cooking. Thus, for one thing, he showed by his treatment of prisoners how they could be well nourished at small cost and without the element of flesh-protein.

Now we learn from the current literature that our Government is seeking physicians capable of teaching dietetics and cooking in our training camps; however, its quest hardly will be successful without its first training such men, inasmuch as the average physician is sadly deficient in knowledge of this kind.

If food is to win the war, then food

conservation and palatable food preparation is one of the great necessities of our present conflict.

The result of Count Rumford's experiments on feeding the army of Bavaria and the poor of Munich was, that the men's nutrition was improved at half the former cost, this being attained by cutting out the meat ration.

A. T. CUZNER.

Gilmore, Fla.

**THE STORY OF JOSEPH GARUFE,
PRIVATE FIRST CLASS, COM-
PANY L, THIRD PLATOON,
— INFANTRY**

On August 9, 1918, we had arrived at a large village in France that was under shell-fire, day and night, by the Boches. This village was situated on the bank of the Marne, which at this point was about thirty feet wide. Across the river, was "the front". Our contact patrols and observations had informed us that the enemy was in force in the woods just beyond the further bank of the river.

At about midnight, orders were received for us to filter across and take cover till next morning, and, by crossing this way, the entire company finally arrived on the other side without attracting any unusual attention from the Hun artillery.

On August 10, about 3 in the afternoon, the command "Forward" was passed along the line. We had to cross another part of the river by fording it where the water was up to our necks and we had to hold our rifles over our heads to keep them dry. Reaching the other side, we advanced along a very good road till we came to a small hill. Here, the first platoon was sighted by the Boches, who immediately signaled their artillery for a barrage. We saw that the enemy was on three sides of us. Machine-gun fire, with its deadly rat-tat-tat-tat-tat-tat, opened up on us from their guns hidden behind trees and up in trees. My platoon deployed to the right and kept advancing, while overhead screamed the barrage-fire, the shells fortunately dropping some distance behind us and doing us no damage.

We were running along the road, closing in on the enemy, when a hand-grenade exploded close to me. One of the flying fragments struck me just above the right knee and I pitched forward to the ground.

As I fell, I slid over the side of the road and down a small embankment, where, below, there was a ditch with running water about a foot deep. From the way in which I fell, my wounded leg was lying in the water, while I was unable to move because of the pain in the injured leg. I knew that it was broken and was bleeding freely. On the road between me and the enemy, at short distances apart, there were lying five others of my company, wounded. The enemy, gaining reinforcements, advanced, and my company fell back. As our men passed where I was lying, they tried to help me to get back with them, but, the pain in my leg was so great and I was so absolutely unable to help myself that they left me and helped some others that were not so badly wounded.

Night fell and pangs of thirst compelled me to drink of the water in the little ditch in which my bleeding leg was resting. German soldiers came out of the woods and looked us over. I offered them 45 francs (all the money that I had) to help me. They paid no attention to my appeals, but, seemed very much interested in finding out that we were Americans. One of the wounded able to walk was compelled to go along with them when they left. I remained where I had fallen and, the pain easing a little, I was able to go to sleep along toward morning.

Awakened about daybreak, I reached down and carefully placed my wounded right leg over on top of the left one, turned on my left side and started to drag myself toward the rear. By pressing my left elbow into the ground, reaching over the head with my right hand and seizing tufts of grass and roots, squirming along a few inches at a time, I laboriously moved about 50 yards to where I saw a German dugout. I called out several times and by and by two Boches soldiers came out very cautiously. Seeing that I was wounded and not capable of harming them, they approached and questioned me. I offered them my little pile of money to help me. One of them took the money, applied my first-aid packet to my leg, took my leggings for a souvenir, and then left me. They carried the other four wounded Americans down to where I was lying, so that we were together, and then they disappeared into the woods.

We had plenty of water, but, no food. All that night we saw signal-rockets flaring

in the sky. The battle continuing, shells were bursting about a hundred yards away from where we lay. A barn about 500 yards away was set on fire by one of them.

When morning came, I again tried the trick of placing the wounded leg over the other one and dragged myself along to the dugout and slid down into it. One of the other wounded Americans, who had both knees shattered by machine-gun bullets, dragged himself along to the top of the dugout. I lay on my back on the floor and caught him as he allowed himself to slide down. The dugout had a board floor; we found good blankets, a stove, some brakish water, ammunition, some "potato-mashers", but, no food of any kind. We made ourselves as comfortable as we could for the night.

The next day and the next, I crawled out of the dugout looking for water. I found several American canteens and one large German canteen full of water. With these, repeating the trip, I would return and share with my wounded companion who couldn't get out. On the third day, hunger compelled me to look farther. About 100 yards away, there was an old orchard, and to this I managed to crawl. Here, I found apples, and in the remains of a garden I found some turnips and radishes. These I took back to the dugout and shared with my companion. My progress was very slow on these trips. My clothing was pretty well worn off on my left side from the constant dragging over the ground, while my elbow was raw from using it to push myself along. It took me from 7 o'clock in the morning till about 3 in the afternoon to make the round-trip.

On the morning of the 18th of August, a week after I had been wounded, I determined to look for help. So, placing all of the water and apples and vegetables that remained, in order that my companion could reach them, then fastening an old pillow to my raw elbow, I started away from the dugout, and dragged myself to the creek. Finding the bridge broken, I managed to ferry myself across on a plank to hand. On the other side, I dragged the plank after me, as I worked my way along on the opposite bank and used it as a means to get across shell-holes. In this way, I covered that day about a kilometer and a half toward the American lines. All the time, the artillery duel was in progress between the German cannon that were far

behind me and the American cannon that were far ahead of me. As night fell, I slept where I was, tired, wet, and cold, while, from the exertion, my leg had started to pain again.

The following morning, I started toward a small bridge ahead of me, but, found it broken in the middle. So, again with the aid of my plank and an empty barrel, I ferried myself across to a small boat-landing on the other side. Paddling underneath it and reaching overhead, I caught hold of the flooring, and, after repeated efforts, managed to pull myself up upon it. After resting, I proceeded to crawl to a house about 600 yards distant. Here, I found a small piece of very hard bread and in the water-pipe was a few drops of water with which I moistened the bread and devoured it. I pulled myself up on a bed in one of the rooms and went to sleep for the night.

Starting out again the next morning, somewhat refreshed after my night's sleep, I made my way down the street of the village, working in the direction from where I knew the American artillery was firing. I came to another orchard and there found plenty of apples. All this day, the artillery-fire kept up. I passed a large church and houses, but, saw nothing living except a small dog. I found what had been a German dugout, crawled in and remained there for the night. There were here a lamp, some furniture, telephone-wires, and a bottle of sour wine. My leg was now bothering me a great deal and seemed to be turning black.

On the morning of the 21st of August, I again started out toward the firing, but, my progress being very slow, night once more came on, when I crawled into another ruined house and went to sleep. Here I found a vase full of withered flowers. I dumped them out and drank the water. There was no food there of any kind. Early in the morning, I awoke and, looking out of the doorway, I saw American soldiers. I called to them several times before they heard me. Several of them came in and, seeing my condition, sent for litter-bearers, who carried me to a first-aid station. A medical officer gave me something to eat, a shot of A. T. S., splinted my leg then, by ambulance, sent me to field hospital, where I had my clothing (what was left of it) cut away, the leg dressed, received hot food, and was placed

on a hospital-train bound for Base Hospital 101.

This lad's story struck me as being a splendid example of the pluck and staying-powers of American troops, and I will finish by saying that, after arriving at the base, Joe was operated upon that same night. He had three operations in all, for, pus had worked along the muscle-sheaths and had to be evacuated, while the wounds had to be drained. Joe now is convalescing. The femur was broken at the junction of the middle and lower thirds. A bone-graft may be necessary, but, he will, eventually, have a good leg, in spite of all of the disadvantages, the liability of gangrene, mixed infection, and all that his hardships entailed.

Lt. ROBERT C. MURPHY, M. C.,
Base Hospital 101,
A. E. F., France.

INFLUENZA AS TREATED BY AN ECLECTIC PRACTITIONER

The Surgeon-General, U. S. A., may know how to treat so-called Spanish influenza, but, treating diseased conditions and curing them is quite another proposition. Let me tell you that my old-school friends here and in many of the places the world over, in treating this disease, have lost from 10 to 20 percent of their cases because of their heroic medication. I have just discharged my 76th case of Spanish influenza (grip), in 10 of which pneumonia supervened. I have not lost a single patient.

If you will follow the trail of a good eclectic or homeopathic physician for the last two months, you will find his fatal cases to exceed not 2 percent. I know what I am talking about.

If I found the patient to have a flushed face, contracted pupils, and a full, bounding pulse, I gave specific medicine gel-selenium and veratrum viride; if the pulse was weak, aconite, not veratrum was given; for muscular soreness, macrotys is the remedy; when there are dilated pupils, with eyes partly open, belladonna is in order. I rely upon iodized calcium for cough, sore throat, and bronchial irritation. I give lobelia whenever indicated.

Now, if a physician knows enough to read the tongue and facial expressions, is a good diagnostician, and will lay aside

prejudice and heroic medication—such as large doses of aspirin and all the other coal-tar derivatives—and keep his patients in bed for from ten days to two or three weeks, he will cure all his grip-patients or lose not more than 2 or 3 percent of them.

J. E. CALLAWAY.

Chillicothe, Mo.

All depends upon what is meant by "heroic" treatment. Certainly, the management of influenza, as we observed the course of this disease during the last few months, requires energetic and definite treatment, besides great care in the prevention of complications and sequels. Doctor Callaway's treatment, conforming, as it does, to the "indications", as understood by eclectic physicians, as these indications present themselves, undoubtedly is excellent. However, other physicians likewise have been successful in the treatment of their grip-patients, and that by employing remedies and doses that Doctor Callaway probably would criticize as "heroic."

We confess to having had during the first one or two days of the disease, a predilection for acetylsalicylic acid, although we are in the habit of guarding the heart, while administering this remedy, with cactin or monobromated camphor. The administration of iodized calcium and of calcium sulphide, both to full effect, may be considered heroic, yet, the practice is clearly indicated and has been productive of good results. Furthermore, the leukopenia, which is characteristic of this form of influenza, is logically combated with nuclein solution, given hypodermically.

In general, the treatment of influenza has to be largely symptomatic, that is to say, controlling fever and pain, supporting the heart and the nutrition, relieving the cough, and preventing pulmonary congestion. Lastly, the patients have to be put on some efficient tonic, in order to overcome the weakness following the severe fever-attack.

THE INFLUENZA SCOURGE

It is 2 o'clock in the night and I am up from a relapse of this "flu" unable to sleep, because of my great nervousness and because one of my twin daughters is now down with this disease.

If "war is hell", what is this influenza? And, putting the two together, then, it is

what? Doctor, we are just now up against some of the great questions of the age. In our extremity, what shall we do? Nearly all my old-home doctors are dead or dying or sick with this dread disease, including my brother, Dr. A. R. Nason, at Tommolen, Mississippi. It is awful! Yet, the American is marvelous and we are winning an unprecedented victory over a most atrocious foe. We have struggled so long and so many have had to die of as unconquerable [?—ED.] a disease as the Germans are as foes, before we can enjoy health.

We, here, are losing every case of pneumonia, no matter what the treatment that is tried. People are dying without medical attention, because they can not get a doctor, and when they do get one of us, of what good are we? I say, really, of what good are we?

Calomel has done more for me than any one thing, save, perhaps, echinacea. What are you doing in Chicago? If you know of anything that will save a poor doctor and his family, tell us of it—yes, wire me immediately.

Excuse my poor writing—I am sick. My head is in a whirl, and, when it hits you the second time, there is some boom to it, I assure you.

I happen to know authoritatively that one night last week 350 died in 5 wards in your own city of Chicago, while next-day's *Chicago Tribune* named only 250 deaths for the entire city.

A. L. NASON.

Darling, Miss.

That terrible scourge, the "flu", has passed over us. At one time, I was the only doctor able to be up. One came down with the disease early and was abed. Another, in an adjoining county, visited a son ill with pneumonia, and the third doctor was away at the deathbed of his only son, who died at college. Our valley is 15 to 20 miles wide, and, to say that I was kept on the move does not express it. Besides, I had to cross the mountain and do work in another valley, seeing 34 families a day and having from 1 to 8 cases in each house. I had 5 down with pneumonia and lost them all.

You never can make me believe that whisky will not cure pneumonia. Iodized calcium did good service, too: the temperature will fall, from 105, to 103 degrees in

ten minutes, and then your whisky comes in. Many, many deaths have occurred; never the like of it has been seen in these parts. At present, now and then a new case comes on, but, I think, we are about over with it.

For the pains and fever, I use 5 grains of acetylsalicylic acid and 3 grains of quinine sulphate every three hours. I kept the bowels open with calomel, podophyllin, and bilein. I was so tired out that I barely could get up when down. I hope that you escaped an attack. I, myself and my daughter, fortunately, escaped. I kept her close at home.

Three-fifths of the victims have sore throat. I used gargle-tablets, composed of sodium salicylate, sodium bicarbonate, and boric acid, 3 grains of each to a glass of water. I ordered gargling every hour.

W. S. CLINE.

Woodstock, Va.

[We print these two letters out of many that were received, as they are characteristic of frequent appeals for assistance that have come to this office. In numerous parts of the country, the members of the medical profession, already overworked on account of the many medical men now being in the service, were, literally, swamped by work; moreover, the epidemic proved so severe in some regions as to be truly a terrible visitation.

Whether it is that in our part of the country the disease was less virulent or that we had taken early and prompt precautions, we are grateful, being able to say that we have passed through the epidemic at relatively slight cost. To be sure, there were some deaths in the families of some of our coworkers, but, not many. Most of the patients recovered promptly and returned to their wonted occupations after only brief periods of illness.

In an epidemic like this one of influenza, it is advisable for everybody, no matter how well or "fit" he may feel, to take proper precautions against contracting the disease, inasmuch as it virtually is impossible to escape being exposed to the infection. We have insisted upon a general and careful disinfection of the upper air-passages (nose and throat), by means of a mild antiseptic solution. As soon as the Rose-nou influenza-pneumonia bacterin became available, it was freely administered in prophylactic doses, a course of three in-

jections being given to all who would submit to it. In this manner, we are certain that many, who otherwise might have yielded to the infection, preserved their health, while in those few who, nevertheless, became ill, the disease appeared in a very mild form.

As to the treatment of the actual disease itself, we have repeatedly expressed our views and refer to the various articles printed in the October, November and December issues of this journal.

Of course, we hope that the epidemic may die out speedily all over the country; yet, we must keep in mind that it is likely to reuinoculate here and there all through the winter, and, in accordance with the results of epidemiological studies, we are led to believe that an aftermath of the epidemic may possibly make its appearance coming in February or March. For this reason, it behoves all of us to be on our guard and to treat every ordinary "cold" and winter-catarrh energetically and, indeed, as though it were a case of the justly dreaded "influenza".—ED.]

TOXIC SYMPTOMS IN INFECTIOUS DISEASES

When in a case of influenza I have a diarrhea, I take it as conservative on the part of nature. Certainly, the elimination of toxins in that way is conservative, for such patients usually have lower temperature than those without diarrhea. So, I don't treat the diarrhea *per se*, but take it as an indication for removing the cause, not of the diarrhea alone, but of all the symptoms of influenza as well. See?

Now, here is a case of severe night sweats, day sweats too, for that matter. I believe this condition also to be conservative. But, what is, in phthisis, the underlying occasion for this increased perspiration which should be removed or obviated rather than the sweating itself.

This is for publication or not as you please; perhaps it's merely "a foolish Query No.", but, I want an answer, and want it d—— bad.

ELMER F. GOULD.

Lincolnville, Maine.

[We quite and fully agree with you in assuming that diarrhea, fever and night sweats are symptoms of toxemia and evi-

dences of the attempts on the part of nature to counteract the foreign injurious substances (the infectious bacteria) that have invaded the body, and to remove them as well as the products of their harmful action upon the tissue cells.

Whenever something foreign to the organism invades the body, the attempt is made to remove it. Thus, for instance, if a sliver is lodged under the skin, there is an accumulation of white blood cells, then, of pus cells, which loosen the firmly lodged sliver in its bed and tend to remove it outside of the body in the direction of the least resistance.

When bacteria invade the organism, mainly through the upper air passages, they also are removed by the production of bronchial and nasal secretions. However, if they find lodgement in the mucous membrane and have succeeded in giving rise to inflammatory manifestations, these in themselves are evidences of the organic resistance. In this manner fever may appear, and it has often been claimed, as long ago as the days of Sydenham, even before him, that fever is a defensive provision of the organism against injurious outside influences that have entered the body. Fever, though, is due likewise to the development of bacterial and other toxins and represents the endeavor of the organism to form substances that neutralize and disintegrate the toxins—namely, antitoxins, or immune substances.

These toxins do not only give rise to fever but may cause various other symptoms, notably diarrhea; and here we come to the question in point. Diarrhea is to be viewed as a reaction on the part of the organism, either to remove irritating substances from the intestinal tract or to eliminate toxic and other noxious elements from the blood. It has been shown that bacteria and their products are eliminated in part through the intestines, in part through the kidneys, and in part, of course, through such anatomical lesions, for instance, tuberculous ulcerations in the lungs and elsewhere, as their action has caused. Undoubtedly, the diarrhea that is often observed in infectious diseases, including influenza, is truly a conservative provision; conservative in so far as it tends to eliminate harmful substances and thereby relieve the body. It should, therefore, not be suppressed by treatment but should be managed in such a manner that the body does

not get weakened unduly by the excessive peristaltic function and does not lose too much of intestinal contents that otherwise might be of use.

In the case of night sweats, likewise, we have to consider the underlying causes. Night sweats, like diarrhea, are best treated by removing the cause, that is to say, by detoxicating the body rather than by suppressing either night sweats or diarrhea, these being simply disease manifestations and not disease in themselves. In both instances, in diarrhea as well as in night sweats, it has been observed quite correctly that the fever temperature is lower when these symptoms of intoxication are well established. Also, if the symptoms do not become excessive in severity, they usually will be followed by increased well being and by a diminution in the severity of other disease manifestations.—Ed.]

THE FLU

What is it like, this Spanish flu?
Ask me, Brother, for, I've been through.
It is misery out of sheer despair;
It pulls your teeth and curls your hair,
It thins your blood and brays your bones,

And fills your craw with moans and groans,
And sometimes, may be, you get well,
Some call it flu,—I call it HELL.

ANONYMOUS.

DOCTOR WAUGH

Doctor Waugh was one of nature's noblemen, and to say that I was shocked beyond expression when a recent number of CLINICAL MEDICINE announced his demise puts it mildly indeed. Then it was that his careful words of encouragement and advice, when my daughter—who was the wife of Senator H. W. Grout, of Waterloo, Iowa, was dying of pernicious anemia, and also his tender words of sympathy after her passing at a Colorado sanatorium, came back to me with great force. It means something for a man of our departed friend's caliber and innumerable responsibilities thrust upon him to write letters of sympathy in connection with his medical advice; and, if true nobility of character, honesty of purpose and pure simplicity ever were harmoniously blended it was in the life of Doctor William Francis Waugh.

I have a letter of more than usual interest written from his winter home in Texas that I shall treasure as one of my choicest possessions. Few men ever live to leave behind them such a enviable record as has Doctor Waugh.

I am truly grateful for the beautiful portrait of him so kindly enclosed with the journal by the publishers.

C. M. H. W.

Blaine, Ill.

CONCERNING HOMEOPATHY

I am a homeopath. If that be treason, make the most of it. I am always interested in the things said in CLINICAL MEDICINE anent homeopathy. But, I am even more interested in the relief of suffering and the cure of disease, and that is why I take the magazine.

Much that Hahnemann said has been disproved by modern research, but, I often wonder whether the fundamental principles he enunciated are not even more generally recognized now than they ever were in the past. It seems to me that the movement of medical theory among all medical men is increasingly in the direction of "*similia similibus curantur*". That sounds pretty

strong, even to me. This movement, surely, is not appreciated; nevertheless, it may be very real.

No one would cry "Anathema" if I should say: "The oldest and best-known example of artificial immunity to disease is vaccination against smallpox, in which by inoculating with an attenuated and harmless form of smallpox (*sic!*) the vital forces are put on guard and immunity to the real smallpox is established." Or, again, if I should remark that "it has been found that the normal animal body responds to the injection of very small amounts of certain bacterial toxins by the formation of antitoxins that are essentially antidotes to their respective poisons". No one would sit up and take notice.

Phylacogens and active immunity are scientific facts. Also, they are homeopathic. Chickenpox, which is not smallpox, leaves something in the body, a phylacogen, that activates the defenders of the body against smallpox infection, which is very similar. An animal product from outside the body puts the body on its guard. This animal product in a healthy body, when in excess, produces symptoms similar to those that in its attenuate form it cures. "This immunity corresponds precisely to the specific character of the vaccination."

This is as far as most of my good readers have gone. Come on, boys don't hang back! Guess! Make a good, broad guess, that possibly not only an animal product, but, vegetable and mineral substances as well, that in excess will produce certain symptoms in a well person, will rouse the prophylactic powers of the body to contend with a disease exhibiting those symptoms. The dose should be small enough so as not to overcome the guards, yet, large enough so that it will activate them.

A. L. KENNAN.

Hillard, Fla.

[The contention, that the modern concepts of immunology and the modern methods of immunization are "homeopathic" in their basis, by no means is new, having been advanced by many writers in homeopathic journals and substantiated especially ably by the learned editor of *The Hahnemannian Monthly*, Dr. G. Harlan Wells. So far, we are quite willing to agree with Doctor Kennan. However, if he reasons, by analogy, that possibly "not

only animal products, but, vegetable and mineral substances as well, that in excess will produce certain symptoms in a well person, will arouse the prophylactic power of the body to contend with a disease exhibiting these symptoms," then an unconditional acceptance of his proposition is more difficult.

It has to be kept in mind, though, that bacterial substances are not animal, but, in all probability vegetable in nature, the bacteria having been classed with the schizomycetes and other forms of lowest plant-life; while only the protozoa, such as those responsible for the spirilloses, also the plasmodium of malaria and a few others are "animal" organisms.

It remains, then, to be inquired into whether higher forms of vegetable substances, such as those making up the vegetable drugs in common use, act upon the organism in the same manner. Since our views of immunity are based largely upon the side-chain theory, according to which substances can be absorbed into the organism if there are present certain specific receptors that are attuned, as it were, to the substances introduced parenterally, it would have to be determined whether the organism possesses receptors "attuned", to, say, digitalis substances or to strychnine or to cocaine, atropine, morphine, and so on. It has been denied that such is the case. At any rate, there is not sufficient information available to determine the question.

As to the further assertion, that mineral substances in minute doses may give rise to the same sort of immunity as do lower vegetable substances, that does seem extremely unlikely basically. The question raised by Doctor Kennan is largely speculative and would have to be investigated very carefully before any definite and positive information could be gained concerning it.—Ed.]

THE ETYMOLOGY OF PIU-PIU

The nickname piou-piou (current spelling, piu) is, by French lexicographers, defined as a foot-soldier. However, slang words, arising, as they do, out of the lower strata of a people, are lawless excrescences to which the rules controlling the language can not be applied; while, moreover, the French tongue is peculiarly given to strange mutations of the sounds of

speech. Note, for example, *peau*, pronounced po, is a contraction of Latin *pellis*, or *eau*, pronounced oh, is Latin *aqua*, or, *clou*, pronounced *cloo* is Latin *clavis*.

So, then, suppose we take a look at *pion*, the French equivalent of our "pawn" (at chess), but, which originally is a regular designation for a foot-soldier. However, the original spelling, as also its pronunciation, was *peon*. But, *peon* now is the Spanish name for a man held in servitude because of a debt, although normally it means the same as in French. Now consider that our English "pawn" is precisely the same as "peon"; also, that, in chess, the German designation for this is *bauer*, meaning "farmer".

This English word "pawn" formerly was written "paune" and "poun" (vowels sounded as in German), since in Old French it also had the form of "poon".

Now to the point. Peon is directly derived from the Latin *pes* (*pedis*), French *pied*, and related to which are, Greek *pous*, German *fuss*, English *foot*. Consequently, *peon* and *pion* and *pionnier* are precisely the same as English "pedestrian"—man on foot, that is, an infantrist. This, of course, does not explain the transformation of *pion* into *pion*, unless, as said before, we allow for popular corruption, such as always plays a role in spoken language and of which we today have painful examples galore. At any rate, when one has, for years, followed up the most astounding permutations encountered in etymology, he is ready to accept almost anything half-plausible.

Next, we find the word "pioneer" taken from the French, and it means, first, also a foot-soldier, then, modernly, a soldier detailed to prepare the way for the army, and thus, secondarily, one who prepares the wilderness for settlement.

Connecting with what was said in the first paragraph, the following digression from the text possibly may be permitted by the Editor, for the purpose of demonstrating the peculiar vicissitudes to which the elements of the Indo-European languages are subject. I have chosen the word water—which, by the way, we here discover to be one of the very oldest elements of this family of human speech.

English, water:—O. Fries. *wetir*, OHG. *wazzer*, G. *wasser*, Swed. *vat*, Dan. *vand*, Gath. *watdh*, Russ. *voda* (cf. *vodka*), Gr.

hydor, Skr. udan, L. unda (wave and water).

English, wet:—Gr. hygros, Skr. ud and unatti (to wet). See "water".

English, dropsy:—E. hydropsy, Gr. hydor (water).

English, whisky:—I. usige (wash, water, i. e. water of life).

English, otter (a water-animal):—Lith. udra, Russ. vuidra, Gr. hydra.

Latin, unda (wave, water):—E. redound (L. re (d) undare), to roll back in waves. E. abound (L. ab-undare) to overflow. E. surround (L. super-undare).

English, wash:—AS. wascan, Swed. vasca. From E. water. E. wiper:—G. wisch (rag for wiping), Skr. pra-unch (to wipe), Skr. unch, from venscho, to wipe.

Further, Webster even seems to connect winter and weather with "wet", "water".

While this word-study, as stated, has nothing to do with medicine, nor even with our "piu", may not it serve to remind some of the readers of their "unabridged", gathering dust in a dark corner, and to inspire them, when snowed in on wintry eves, to delve into those wondrous pages, the educational as well as entertainment value of which is, alas, understood by all too few. How few, even, are aware of its value to doctors for purely professional purposes, besides general scientific subjects!

ADOLF G. VOGELER.

Chicago, Ill.

Memorandum in explanation:

E.—English	D.—Danish
AS.—Anglo-Saxon	I.—Irish
G.—German	Goth.—Gothic
OHG.—Old High, German	Lith.—Lithuanian
Gr.—Greek	Russ.—Russian
L.—Latin	O. Fries.— Old Friesian
Skr.—Sankrit	

IS THE FAMILY PHYSICIAN TO BE REPLACED BY THE COOPERATIVE CLINIC?

Doctor Hirshberg's "Engineer's Lament" (*CLINICAL MEDICINE*, August, p. 619) is a fiction of his own perfervid socialized mind; but, then, he adds that it is "almost wholly true". Not quite, "almost wholly true", Doctor, but almost wholly damnable false.

When this war broke out, America sud-

denly woke up to the fact that her higher educational institutions were saturated with German "kultur", with materialistic and socialistic philosophies and scientific absurdities. The medical profession, especially, was overstocked with pseudoscientific fads, fakes, and frauds. And, while the general public was not slow in unloading its part of the noxious cargo, the profession still is hugging its delusions, although most of them are dead and putrid, and it is time to take an inventory of stock and make a good housecleaning.

The clinics that Doctor Hirshberg mentions, from that of the brothers Mayo down, have degenerated into mere mechanical laboratory-machines, from which the human, the personal element has been almost wholly eliminated; people going to those clinics are not patients, they are just material, the same conditions prevailing there as those that were so well known in all German clinics for many years. They do, however, all seem to possess super-human facilities both for self-advertising and for belittling and discrediting the general practitioner. And, inasmuch as nearly all state and many municipal health-boards and state universities maintain laboratories where tests and examinations are made at a nominal cost, I fail to discover a crying need for any more laboratory facilities, especially when one considers the fact that much of the work done in that direction is just a refined and concentrated system of pure graft.

To specify: take Koch's tuberculosis bacillus, now well known to be a universal bacillus that is found in the sputum of 92 percent of healthy persons [?!--Ed.] and, therefore, has no diagnostic significance whatever; and, yet, the practice is almost universal to base a diagnosis of tuberculosis upon the finding of that bacillus. The fakery of it might be excused; however, thousands of sick people have gone into untimely graves, because of the depressing effect such an ill-advised diagnosis has made upon a sensitive overwrought organism. The Klebs-Loeffler bacillus, also, is a universal microbe, being found in healthy throats as well as in many acute diseases other than diphtheria, such as, for instance, measles, scarlet-fever, pneumonia, and other infections, while in some of the most virulent cases of diphtheria it can not be found. And still you see many doctors, when they get a case of sore throat, send

a swab to a laboratory and base their diagnosis entirely upon the finding. When one considers the fact that there are many kinds of sore throat and that not more than one case in ten is one of true diphtheria, the absurdity of such a method of diagnosis becomes apparent. And then they will charge their patients, many of whom can ill afford such expense, from \$5 to \$15 for the examination and from \$5 to \$25 additional for administering antitoxin. And this kind of work is not done by the country practitioner, either, but, by the very elect "specialists" in our centers of population! It is enough to make an honest man furious, for, it is the most stupendous piece of graft that the medical profession ever has been afflicted with.

The Wasserman test for syphilis has proved entirely worthless, while syphilis is such a serious malady that any one basing his diagnosis of its presence or absence on this test not only jeopardizes his own reputation, but, also the safety and happiness of his patient. The indiscriminate use of x-ray work in surgery prompts the query, whether it would not be better to have a few poorly set fractures and dislocations than to have so many maimed for life by x-ray burns.

I might continue in this vein, however, what I have presented will suffice to illustrate the charges made; and I am not decrying laboratory work, but, merely the abuse of it. The competent physician, however, makes his diagnosis from the clinical evidence, supplementing and verifying this by reliable laboratory tests. And the "woods are full" of such general practitioners, who are safer, surer, and better diagnosticians than your cooperative-clinic-laboratory, ultra-scientific specialists-in-fads doctors; and they do not have to suck their thumbs, either, in order to reach correct conclusions.

The last part of Doctor Hirshberg's article, where he quotes the Surgeon-General, together with his own concluding paragraph, are both unwarranted flings at the civilian physician. I know that during the winter and spring in many, if not all, the military camps the death rate from pneumonia, measles, and cerebrospinal meningitis was appalling. When one considers the fact that those young men were picked for their physical fitness and that there is no acute disease that is so easily

controlled by modern therapeutics as is pneumonia, one can be excused for being thoroughly disgusted with the Army Medical Department.

As for the social diseases, I know that conditions at our state military camp actually were terrible, that the War Medical Department failed miserably in having control over the situation, and that the city authorities of Des Moines confessed their inability to remedy the trouble, that public opinion became aroused to a high pitch and brought so much pressure against the disgrace that the government at Washington had to interfere toward correcting the evil. And I also know that in many other camps conditions were but little better. When our boys were down on the Mexican border, the same conditions prevailed there. The medical department confessed its inability to control it, and General Funston issued a drastic order, giving camp-followers twenty-four hours to leave, those remaining to be shot.

But, the worst load that the medical profession of America is carrying today is, not social diseases, but, just Socialism, a disease of a low order.

Socialism is an assumed name and shows how a world of iniquity can be covered up and glossed over with one euphonious word. The real name for those of that faith (?) was, for many centuries, heathenism. And it is these worthies that are responsible for the propaganda for health-insurance as well as for the cooperative-clinic agitation.

And what is Socialism? Just envy, the envy of the shiftless against the thrifty. One of the inspired prophets tells us that Satan became envious of some of his fellow angels and started a revolution, for which he was cast out of heaven. But, he managed to gain an entrance into the Garden of Eden, where he seduced Mother Eve, thus introducing evil into the world; and the two forces of good and evil have been contending for the mastery ever since. Also, the sacred historian tells us that Abel was thrifty and prospered, for which he found favor with the Lord, while Cain was not thrifty, and, so, became filled with envy and rose up and slew his brother Abel. So, Cain became the first Socialist (heathen). And the spirit of Socialism of today is exactly the same as that of Cain, from the unlettered bomb-throwing anarchist to the



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most learned professor in our higher institutions of learning.

However, it seems that, when once a man becomes infected with the malady, the more cultured and educated he gets, the more virulent and vindictive he becomes. The advent of the Christ, promulgating the doctrine of the fatherhood of God and the brotherhood of man, was the first serious opposition to Socialism. They talk glibly of this humanitarianism, but, the voice is that of the wolf in the sheepskin, for, all real Socialists are atheists and antichrist, and there can be no real brotherhood without a father. And Christ gave us the rule that "by their works shall ye know them", and, if you will read through a whole library of socialist literature, you will find that almost every page of it breathes envy and threatens revolution.

Compare the work of the Christian organizations of America with organized Socialism, from the great missionary societies, the Red Cross, Y. M. C. A., K. of C., Y. W. C. A., Christian Endeavor, Salvation Army, the Belgian, Syrian, and Armenian relief associations, and others too numerous to mention. These, since the war began, have expended billions of dollars in humanitarian relief work and have rescued and saved millions of human lives. And what has organized Socialism done? Echo calls back, "What?" They have, however, succeeded in keeping the department of justice at Washington busy the year round. A year ago, their national committee at Chicago voted to raise a million dollars, ostensibly for campaign purposes, but, really to get and keep their members out of jail and to keep them off the gallows.

When a Socialist gets well advanced in the order, so that he can talk loud and long, he becomes an Internationalist, ceasing to be a man, but, becoming a creature without a country and without a soul, hated of God and despised by man. Some of the foremost of their graduates, among others, are Lenin and Trotzky, Sir Roger Casement (executed for treason), and "Big Bill" Hayward (sentenced to the penitentiary).

This war has brought to light in a startling way the complete union of all the evil forces in this world, from the heathenish aristocracies of Europe to the Bolsheviks of Russia, from the Sinn

Feiners of Ireland down to our own I. W. Ws.

Some of the world's greatest statesmen have tried to answer the question, What are we fighting for? Some say, to destroy obsolete autocratic governments, some, to make the world safe for democracy, others say, to make the world a decent place to live in; but, every thinking man feels in his inner conscience that none of the answers are satisfactory, for, there might be a righteous autocracy. Abraham was a typical autocrat and he walked and communed with God. On the other hand, a real democracy like the present one in Russia, is just an illustrated *de luxe* edition of hell on earth.

We surely are not fighting to make the world safe for any such democracies! No, the question is a much larger one, yet, also a very simple one. It is just Christianity against heathenism, or Christ against Satan. And, to illustrate, just compare France and Germany. "By their works shall ye know them". Noble, heroic, self-sacrificing France! All her actions, from the beginning of the war, have been typically those of a Christian nation, while Germany has violated every law in the decalog, in addition to which she has invented fiendish outrages that the author of that code had never dreamed of, atrocities so diabolical that they would make the most accomplished fiends in hell greeneyed with envy. In fact, the head of the Prussian autocracy is the very personification of Satan incarnate.

I close with the prediction that an overruling Providence will not permit the Prussian autocracy to sue for peace until its power is completely destroyed.

W. A. MARNER.

Miles, Iowa.

[We hope, Doctor Marner feels better after having let off steam in this emphatic manner. However, he is in error regarding the frequency and importance—or the nonimportance—of pathogenic bacteria, such as the bacillus of tuberculosis and that of diphtheria. For one thing, the tubercle-bacillus is not found in the sputum of 92 percent of healthy persons. Evidence of tubercle-bacillus infection has been detected in so high a percentage of healthy persons in certain communities, but, in these instances, the bacilli were imprisoned in the lymph-glands, and were not found in the sputum. Whenever the tubercle-

bacillus is found in the expectoration, this denotes an open tuberculous focus and one that always is contaminated with secondary infective microorganisms.

In short, the finding of tubercle-bacilli in the expectoration means phthisis, or pulmonary consumption. To be sure, the bacilli may persist in the expectoration during convalescence, and even for a long periods afterward. If convalescence is well on the way and the tuberculous lesions are healing, the little red rods, however, will show evidences of disintegration.

It is true, though, that tubercle-bacilli as well as those of diphtheria have been found in the nasal passages as also in the pharyngeal secretions of healthy persons. But, this was the case only in people who had been in close contact with patients ill with these respective diseases, and, the fact that the bacteria were found in the secretions of healthy persons does not show the innocuousness of those germs, but, only the satisfactory immunity or the resistance on the part of those who are thus infected, yet, without acquiring the disease.

We are persuaded that Doctor Marner views conditions more darkly than is justified by fact. The modern methods of laboratory-research, especially of clinical-laboratory research, undoubtedly are of the greatest benefit in enabling physicians to arrive at definite diagnoses more speedily than they could by clinical observation alone. That methods like the Wassermann test for syphilis or x-ray examinations are erroneous and useless, is incorrect, as are other opinions that are voiced by our correspondent. Of course, if complicated investigations are undertaken merely for the purpose of increasing the fees, they become vicious. But, we absolutely refuse to support Doctor Marner in his contention that the physicians of the United States are a lot of grafters and thieves. We venture to say that, with few exceptions, the work done by physicians is absolutely honest, done in good faith and by no means with an eye primarily to the dollars that may be involved.

Frankly, we rather deplore Doctor Marner's attitude as evidenced in his criticisms and accusations, believing that they are unjustified and unjust. This is true also in great measure regarding the strictures of the medical service of the Army.

We are quite aware of the fact that serious epidemics occurred and that many of

the soldiers succumbed to them. We also are aware of the fact that many unfortunate instances of insufficient preparation and service have occurred. In a few camps, the management both of the medical service and in other respects seems to have been woefully lax. On the whole, however, it must not be forgotten that we can not judge from isolated individual occurrences, but, that we must think in large figures. From this point of view, the morbidity as well as the mortality among American soldiers and sailors has been far less than that of the Japanese army which hitherto has claimed the best records.

When Doctor Marner indulges in a condemnation of Socialism and its vicious outcroppings, we can not follow him, either. That, though, concerns questions of a non-medical nature in which we prefer not to express opinions. If not too much space is asked for, however, we shall be ready to accept a few replies to Doctor Marner's letters. But, please, make it concise and short.—Ed.]

PHYSICIANS WANTED IN IDAHO

W. D. Keller and Son, druggists at Culdesac, Idaho, are anxious to secure a good physician for that locality, asserting that there is a big field for a general practitioner in that location and that one is sorely needed. We suggest that physicians looking for a good opening with plenty of work communicate with the firm mentioned.

GOVERNMENT AID TO WOUNDED SOLDIERS

The United States Government is resolved to do its best to restore every wounded American soldier and sailor to health, strength, and self-supporting activity.

Until his discharge from the hospital all medical and surgical treatment necessary to restore him to health is under the jurisdiction of the military or naval authorities, according to the branch of the service he is in. The vocational training, the re-education and rehabilitation necessary to restore him to self-supporting activity, is under the jurisdiction of the Federal Board for Vocational Education.

If he needs an artificial limb or mechanical appliance the Government will supply it free, will keep it in repair, and renew

it when necessary. If after his discharge he again needs medical treatment on account of his disability, the Government will supply it free. While he is in the hospital and while in training afterwards, the soldier or sailor will receive compensation as if in service and his family or dependents will receive their allotment.

A wounded soldier or sailor, although his disability does not prevent him from returning to employment without training, can take a course of vocational training free of cost and the compensation provided by the war-risk insurance act will be paid to him and the training will be free, but no allotment will be paid to his family.

Every Liberty Bond holder who holds his bond is keeping up a part of this great work of restoring to health, strength, and usefulness the men who have suffered for their country.

LETTER FROM FRANCE.—V.

The burial-grounds of the Americans who fell on the field of honor during the months of June and July are being put in perfect order, so that, when the war is over, their relatives will be able to find the resting-place with little difficulty.

Around Lucy-le-Bocage, where the Marines first went into action, and around Bouresches and the Belleau Woods the Americans advanced so rapidly that it was possible to give only a temporary resting-place to the brave ones that had fallen so gloriously. Small parties were detached to throw a few spades of earth over them on the spot where they had fallen face downward in their first on-to-Berlin rush. Many of them fell in shell holes, which were easily enough filled up for the moment. Others fell in the open, and comrades would stop long enough to throw a little earth over them and put up a cross.

Now all those shell holes are being searched out, the bodies are being removed, their identification-discs carefully collected, and the bodies are being placed in proper graves in rows along the road. The bodies are being buried in groups of twenty-six, side by side, with a wooden cross marking the head of each individual grave. On every cross, there is placed an aluminum plate bearing the name and number of the soldier, with one of his identification-discs attached just below.

The ground is being searched inch by

inch, so that there is no possibility of any of these glorious lads that have lost their lives for their country being overlooked and left in an unmarked grave, and it is a great satisfaction to note how very few of the aluminum plates bear the word "Unknown".

Detachments of Negroes were at work under the supervision of a white sergeant and several other white soldier assistants. While they agreed that it was a frightful undertaking, they said that they were repaid by the thought of the satisfaction that would be derived by the parents of these fallen soldiers, because of the knowledge that their sons were being buried so that their graves might be found after the war. In many instances, valuable jewelry and other personal articles, are found on the dead, and these are sent to the parents without delay. Recently, the body of a lieutenant was brought in, on whom 12,000 francs was found. It was difficult to decipher his name, but, it was something like Milsen, and he was from Philadelphia. Those in charge never lost sight of the fact that the parents may decide to take their dead home after the war is over and always the graves are made carefully with that thought in mind.

The groups of graves are not all near together, but, are scattered along the road, where they occupy space that would not be used for anything else and indicate the first path the Americans took on their road to victory. The graves are not merely barren mounds of earth, marked with their simple wooden crosses, but, in many cases the soldiers of this detachment have stopped to form the letters "U. S. A." with tiny white pebbles embedded in the earth, and have planted flowers; while, of course, the flag is there, too.

In looking from a hilltop, not far from Belleau Woods, over these American graves, with an occasional French cocarde marking a fallen brother and a German's grave here and there (I recall one marked with a German spiked helmet), one might be overcome by the pathos of the situation; yet the glory of it all is so overpowering that the pathos is lost and one comes away filled more with pride than sorrow.

Broadway sent a shining star to Longchamp last night, to brighten the hearts of the men of the Ambulance service stationed there, and the star, Miss Irene

Franklin and her "Broadway bunch" made a big hit with the Longchamp camp. The same charming personality that has won her audiences in the States was evident on the improvised stage in the Longchamp mess-hall. The songs were full of snap and brightness, and in response to popular demand she sang her immense success, "Redhead". Together with the "Broadway bunch", appeared the "Magic-Melody-Mirth" Company. They won the audience from the first and their place in the memory of the ambulance men is assured.

Soldiers stationed in the Paris district have their choice of several entertainments this evening, when three theatrical groups, that are operating under the auspices of the American Y. M. C. A. are to appear.

Irene Franklin and her "Broadway bunch" at Fort de Stains; D. C. MacIver's "Magic-Melody-Mirth" at Hotel Pavillon·Adler's "Laugh Barrage" at Orly.

The "Magic-Melody-Mirth" Company, which also will play a Saturday matinée at the U. S. Hospital at Auteuil, provides a very good evening's entertainment. The company consists of D. C. MacIver, H. Pierson, Madeline I. Glynn, and Alfred Armand. MacIver was, for four years, a magician and illusionist of high standing on the vaudeville stage. Some time ago, he retired from the boards to engage in mining in Arizona, but, when the call for volunteers for theatrical work in France reached him, he gladly packed up his black book and came over.

A "Laugh Barrage" is a pleasing mélange of humor and songs, with Harry Adler, ventriloquist, manager; Kate Condon, Amy Horton, Paula Sherman, and David Lerner.

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In one month's time, the 5,000 refugees returned to their homes in the reconquered districts of the Aisne and Marne have been aided by the American Red Cross. Forty-five carloads of supplies have been sent since August 5 to Chateau-Thierry, Essonnes, Dormans, Troissy, Verneuil, and Villers-Cotterets. These camions, known as rolling grocery-stores, make the rounds of the districts, to supply the needs of the homecomers in the places where no shops have as yet been opened.

Arrangements are now being made by the American Red Cross to send out a

force of workmen for provisional repair-work in the shell-ruined villages. More than 100 peasants returned each day to Chateau-Thierry and nearby towns. In the Somme district, the Red Cross is gathering supplies in huge warehouses, in preparation for the return of the refugees. The equipment includes everything, from paint-brushes and chicken-wire, to food and coal.

The villages are now simply piles of ruins. The roofs are torn asunder, the walls overturned, exposing the interior of what once were happy homes. Fragments of broken furniture are scattered here and there. The belfry of the little church, has, in falling, broken through the vaulted roof of the nave, and a great image of crucified Christ stretches out suffering arms upon this sinister chaos. The fires still are smouldering in place. An acrid and sickening smell seizes upon one; the smell of the Huns. They were still here last night.

An American battalion that was in the very thick of the fight is endeavoring to find billets among these ruins. The men have been promised three-days' rest. Worn and fatigued, covered with mud, their cheeks fevered, the men throw down their packs and throw themselves down just anywhere—be it in gardens ploughed up by shells or in roadside ditches. The tents have not been pitched and every man is obsessed by the one, single thought—sleep!

On the morrow, the sun is shining. Toilet-sets appear from all the packs; the men wash and shave themselves, clean their uniforms, and change their linen; the fatigue and privations of past few days already are nearly forgotten. Suddenly shouts of joy resound. From the window of a small house, not quite so completely demolished as the neighboring ones, the Stars and Stripes are floating and a red sign bearing the letters Y. M. C. A. is being discerned.

During the night, three autos had arrived, laden with chocolate, milk, cigars, cigarettes, biscuits, candy, soap, newspapers, or in a word everything that delights a soldier. Miss B., who is in charge of this expedition, has, with the assistance of her valiant volunteer staff, cleaned up this miserable hovel and managed to lend it quite a festive appearance. Her trim figure is seen everywhere; her gray-cloth costume, cut on military lines, her highlaced boots, her blond hair straying from under her

big felt hat, her gentle blue eyes are well known to this Division.

Where shells were falling yesterday and poison gases were still lurking this morning, there now reigns a feminine smile. May you be blessed, you, who, risking your own life every day, thus comfort with your presence the brave men that have done their duty!

Experiments with a new system of partly restoring sight to the blind are being made at Nice. This system is the invention of a Polish savant named Kann, a soldier in the Foreign Legion, and is based upon the principle that, even when the eye has been removed, the optic nerve may remain sensitive to rays of light. This invention is an apparatus resembling a Carnival mask, and it contains prisms and a chamber in which the rays of light are filtered. This apparatus is connected with a small induction-coil in the patient's pocket. With the help of this contrivance, blind men have been able to identify all the colors of the spectrum, as well as ordinary white light and shadows caused by solid objects. One wearer succeeded in distinguishing the outline of pieces of furniture and in counting uplifted fingers. The experiments are being continued.

The rehearsals of the war choir of the Paris American Church of Holy Trinity will be resumed when applicants for membership can attend. This choir, composed of soldiers, sailors, and men and women war-workers of the Allied Red Cross, Y. M. C. A., all volunteering their services, has sung at many ceremonies since its organization in last March, notably at the Memorial-Day Service on May 30.

Demands of the military and relief organizations cause fluctuations in the strength of the choir. The choir will collaborate with the French choral society, the Chanteurs Classiques de Passy, of which Mr. Gustin Wright, the organist of Holy Trinity, also is conductor, in giving a series of oratorios and musical services during the winter for American soldiers in Paris, beginning next month.

Doctor Dommartin, head physician of the Nice military command, yesterday visited the American hospital No. 107 bis and the Russian hospital No. 139, to present four medals of Reconnaissance Francaise, the

first that have been awarded in Nice. At the American hospital, the silver medal of the second class of this new decoration had been awarded to Mrs. Alice Dulany Hunter, the wife of the American Consul, who is the directress of the formation; and to Mr. Richardson Robinson Riley, the American Vice-Consul, the administrator of the hospital.

The recipients of this decoration at the Russian hospital are, Count Michael Rohozinsky, founder and administrator of the hospital, and Princess Ouroussoy, the head nurse. Doctor Dommartin could present only the ribbon of the new decoration, as the medals have not yet been struck. The ribbon is white, edged with blue, white, and red.

At each hospital, the principal physician indicated the titles of the recipients of the new distinction to the recognition of the French Government. Everyone here knows how perfectly these two voluntary hospitals, which are entirely dependant upon their own resources, are administered and with what untiring zeal and constant care all the nurses attend to those in their charge.

Nowhere in France is a single incident or occasion allowed to pass that in any way appears to give a chance for the French to show their appreciation of an love for America and Americans. While American troop-trains were passing through Enghien les Bains, a work-train crashed into a troop-train, and one American soldier, Private William MacKnight, was killed outright. Another man, Private Ward Lewis, was terribly injured. Four other men were more or less seriously hurt. MacKnight's body and five wounded were brought into Enghien les Bains. They were then taken to the French Hospital of the Casino. Privates Ward Lewis and Henry D. Lowery were both operated upon in the presence of Mrs. Addy Weaver, of the American Red Cross; but, in spite of all possible help and devoted care, Private Lewis died at about midnight, and on Monday morning, at the American Hospital, Private Lowery passed away.

An impressive funeral service, arranged by the Municipal authorities of Enghien, was held for Privates Lewis and MacKnight on Saturday evening, near the Hospital. Red Cross men and women were present at the service. Many beautiful

flowers were placed on the coffins by French, British, and American sympathizers. The ceremony was an impressive one.

Doctor Helary, the mayor of Enghien les Bains, in an eloquent oration, paid a high tribute to the American army and to the unfortunate young soldiers. Many of the inhabitants of Enghien accompanied the hearse. A detail, which will speak for itself, is that, notwithstanding the deceased Americans having been of the Protestant religion, Abbé Simonin, Rector of the Catholic church of Enghien, brought to the cemetery a beautiful wreath of flowers to the funeral and was among the leading followers of the poor boys' bodies.

When Newton D. Baker, United States Secretary of War, landed in France for his present visit, his first official call was upon two representatives of the American Red Cross, the Misses Lansing, who organized at this port a canteen for the American wounded returning to America. Secretary Baker was accompanied by John D. Ryan, formerly a member of the Red Cross War Council and now at the head of the American aviation; by the brigadier-general commanding the United States army at that point, by the French admiral who received him, and by Captains Hitchcock and Hooker, of the American Red Cross. He immediately congratulated the Misses Lansing upon their reception of the War Cross, and was keenly interested in the work which they are doing for the wounded soldiers returning to America.

This is one of the more recent activities of the American Red Cross. The two workers that have organized it have a central receiving-point for sandwiches, hot drinks, cigarettes, chocolate, et cetera. Here they oversee the making of sandwiches and hot drinks for the soldiers, and from here they take them to the boats and distribute them to the soldiers on the lighters carrying the men out to the hospital-ships. In the unavoidable delays between detraining and getting settled on the boats that take them to America, there sometimes are long intervals when the soldiers have no regular meal served to them. It is a comfort to them to be sent off to America with a parting Godspeed from their Red Cross friends in France and with sandwiches, hot drinks, and cigarettes. Naturally, Secretary Baker was much interested in an undertaking which is especially devoted to the welfare of the wounded sol-

diers returning to their native land—heroes who have done their part, and done it well.

Details received from Murcia and Valencia confirm the news that the Spanish grip has again broken out in those provinces, and the population is alarmed. At the town of Lorca, a girl belonging to one of the best families has succumbed. At Catarroja, Alcira, and Valencia, itself, there are many new cases of the epidemic.

The situation is much aggravated by the fact that, on account of the scarcity and high price of food, the inhabitants are in a state of weakness that favors the spread of the epidemic.

B. SHERWOOD-DUNN.
Paris, France.

THE EIGHTY-NINTH MILE-POST

Inhospitable vicissitudes have been passed through and surmounted in the last stage of this tremendous pilgrimage of mine. The climax was reached a year ago, as I have told, in sustaining a fractured skull and loss of blood but slightly short of causing dissolution. Since then, a marvelous change came over the spirit of this tropical dream, tantamount to my resurrection to an active state of rejuvenation. A fresh blood supply filled my depleted arteries, setting back my physical and mental faculties at least a score of years. The surprise thus given was almost a startling one to my friends, the superstitious natives who witnessed my rejuvenation.

Maybe some superannuated professional brethren, trembling on supporting canes of senility, might like to know something about this process of my recuperation in this period of wasting of old age. As to the copious letting of old blood which I then experienced, I hesitate to urge it upon others, although believing it was the active factor in my own transformation. In the practically hopeless semi-comatose crisis, fresh boiled milk, steaming-hot, was brought to my bedside any hour both by married women and young girls, with the cheerful salutation of "Doctor, aquí está su leche" (Here is your milk, doctor). And I should scorn any man so unappreciative as to turn up his toes under such inspiring influence, when those gazell-eyed lassies, as beautiful to a fading eye as Beatrice is reputed to have been dazzling, ever were importuning: "Doctor, hurry up

and get well, we need you so much." Who of all of you could have had the heart to leave them, with no promise of some other doctor taking your place? The crisis passed, I had a plate of oatmeal mush with two well-beaten raw eggs stirred in after it had cooled enough not to coagulate the albumen; and, three times a day, I had egg custard and ripe bananas boiled in the skin. Remember, bananas thus treated are far more nourishing than is the best cooked beef meat.

I went to work in the office again within ten days; and a month later was in the streets, skipping over the rolling hills of this quaint old city like a young man, although the fracture in the skull continued to ooze for more than six months. My robust, vigorous health, in fact, has in no degree abated.

While hatred of Americans is almost rabidly intense, I, personally am more popular with every class than any native possibly could be. German propagandists have intensified this hatred, and have wrought the army and a large percentage of the civil population to such a degree that they would have made war on the United States, only the impoverished and destitute condition, which the long-protracted revolution developed, rendered this impossible to attempt, especially with rebels ready to attack such invading army in the rear. But, now, that the high tide of German prosperity is ebbing, there is little cheering hope here of a German victory. Wealth from plundered agriculture and rich American cities and the restitution of Texas, New Mexico, and California comprised the most tempting propaganda the Germans ever offered, and one that really seemed feasible to the duped Mexicans.

Mexico is almost as deplorably ruined as are Belgium, northern France or Russia, the depredations committed by its own native people being almost as atrocious as those of the Germans in the countries named.

There is no hope of a Mexican peace. Possibly a moral pressure by England, France, and the United States might be so employed as to intimidate the hostile spirits, after peace is made in Europe, which now seems to be nearer than we had expected but a short time ago.

I have been tugging at the tense patience of CLINIC readers with the long-winded spirit of the "old story", finished and

mailed to Chicago more than four years ago, so that I am seriously uncertain as to the selection of proper subject matter to interest you.

The revolution, destitution, hunger, misery, and death continue unabated, only more intensified.

I am at a loss for something to say along therapeutic lines, as I am jogging along with my well-confirmed favorite remedies, now fully familiar to the profession. In September, your war-board denied me vaseline, quinine, oil of any kind, and sundry other items once deemed indispensable, thus teaching me to get along very well without them. I have seriously adopted calcium sulphide, in place of quinine, both to break fever and to prevent its recurrence; while "staniloid" does many more good turns than the makers and the profession realize.

You people should be immeasurably proud of your American president, who will majestically tower in the loftiest niche of the temple of immortal fame after the mere names of previous heroes and conquerors have been submerged in the gulf of oblivion. Truly, Wilson had a great America to lead, but, his magnetizing guidance and electrical utterances inspirited the good and intimidated the bad to such a degree that universal "Liberty" will become more than a fleeting dream; and he will be recognized and revered as the creative genius, as Washington was the Father of his Country.

ROBERT GRAY.

Pichucalco, Mexico.

[Doctor Gray's remarkable recovery from the serious injury that he sustained is little short of miraculous. Nor can we be content with passing it off without at least a brief comment. The question obtrudes itself upon the present writer's mind whether the great affection and veneration in which the natives hold him, the need that they have of his services, and his own untiring devotion to his work did not combine to mobilize forces and influences which became active in his behalf and brought about his recovery. The days of miracles are past, you say? Perhaps so. The present writer does not believe so, however. Truly, there are more things At any rate, we trust that Doctor Gray may be spared for his work, and that his strength may continue for long.—Ed.]

After the World War

THE MAKING OF AN ARMY MEDICAL OFFICER Life at a Base Hospital in France

[Continued from December issue, p. 6]

I was fortunate to hear and see Elsie Janis at one of her first performances for the troops in France. She went from camp to camp, reciting and singing at each, and was received with a roar of enthusiasm everywhere she went. Shortly after her visit, I saw in the papers that a great many of our American theatrical stars were going to follow her example, coming over here to entertain our troops at camp, post, and field. This offer of theirs shows a wonderful spirit and is but one of the incidents that go to show that you who are at home are with us in this big game and are but waiting each for his or her opportunity to do anything possible to help, and in any way possible. The French entertainers have already been doing this for some time. They come and sing at the hut of the Y. M. C. A. for all that can come to hear them and after the performance go to the wards where there are many bed-patients, repeating the entertainment for those. This is highly appreciated by all of us, but, particularly by those that are unable to get out of bed.

Sometimes these entertainments were staged by the Y. M. C. A. and sometimes by the Red Cross (American). The American Red Cross was active at this hospital. One of their representatives would distribute the daily papers and magazines through the wards, on other days he would pass out games, stationery, and books, write letters for the patients that were too sick to write their own, and would undertake to straighten out legal affairs at home. They distributed phonographs to many of the wards, changed records as often as possible, placed a safety razor in each ward for the men to shave themselves, had at their hut a miniature circulating library, where patients could get other books to take to their wards. The patients would sign a card for the book, to insure its return when it was

read. Their chaplain held services on Sundays, in the Y. M. C. A. hut, while during the week he visited wards, helping in every way that he could, giving temporal as well as spiritual aid and comfort, accompanied funerals and read services at the graves of the soldiers that had died. A small part of an army-chaplain's duties is, to write to the nearest kin of a soldier that has died, telling the loved ones at home that their soldier lad had had a military funeral, telling where he has been laid to rest, and extending sincere condolences.

One of our nurses died of pneumonia shortly after I arrived at this post. She was given a military funeral. The cortège was led by a brass-band (from a neighboring infantry regiment), then followed, respectively, a firing squad, a soldier carrying a wooden cross, two chaplains and an American Red Cross representative, an automobile ambulance with her remains in a flag-draped coffin, about twenty of our Medical Officers, all the nurses that were off duty or could be spared from their wards, and a detachment of enlisted men of the Medical Department. The band struck up the "Dead-March", and, to the cadence of its slow strains, we wended our way to the cemetery. Arrived there, a short prayer was read by the chaplain, three volleys were fired as the coffin was being lowered into the grave, and then taps was blown on the bugle. She was shown all the respects of a comrade-in-arms. Heroes are not all in the front-line trenches.

Decoration Day was celebrated by the American troops in France in much the same way as we do in the States. Detachments from the various camps and posts around this section assembled at the American cemetery, where short speeches and prayers were said, while the nurses from our hospital decorated the graves of the American soldiers that were buried there. As a final, taps was blown by a bugler. Taps, or lights-out, the sweet sad strains ringing through the cemetery stir a feeling in the heart that is hard to describe, and,

while listening to it, many a silent vow was made that each would acquit himself or herself creditably of the task laid out for us in this battle for democracy.

The French cooperated to the extent of sending a regiment of their troops from the nearest barracks, to act as escort. A group of French officers came along, also, and were very much impressed and interested by the ceremony. This was a very pretty compliment to our Government, our customs, and our soldier dead.

July Fourth also was celebrated as at home. Here, again, the French people showed their desire to be with us in our celebration. Flags of the Allies were to be seen everywhere along the streets, on buildings, and on vehicles. The American and French flags predominated, and in most cases were grouped with other flags or these two crossed together. Detachments of troops from the different organizations, stationed around the city escorted by detachments from the French and English troops, paraded the downtown streets. As we swung along the Boulevard de l'Océan through two solid lines of cheering people, it took but a small effort of the imagination to think we were back on Michigan Avenue, in the "City of the Lake", where on many a holiday some of us had taken part in just such a parade. The afternoon of the Fourth was, generally, celebrated by field and track meets, by base-ball games, and by sports.

On July 14, the French Independence Day, I happened to be in another city away over at the other side of France, having been ordered there to take a special course in the treatment of shock. All American officers in the city were expected to take part in the parade in honor of the day. Parades are as meat and drink to me, and, so, I was at the place of assembly on the morning of the 14th, long before the appointed hour. A reviewing-stand had been erected on one side of the principal parkways, or boulevards. The American officers fell in in double rank, near the stand. Along the boulevard, other detachments of American and French troops assembled. A French general, accompanied by his staff, walked along the line of troops. As he drew near us, we came up stiffly to attention. He quickly came to a salute, smiled and said, "I am very glad to see you here," then asked some of our ranking

officers to accompany him and his staff along the line. At the presentation of medals, we were drawn up in double rank, just behind the French officers and soldiers, who, by virtue of some valorous deed, were there to receive from their appreciative government this token of official recognition.

I had never seen one of these presentations before, so, I was deeply interested. The General read an account of how he had won distinction, ending by saying that in the name of the President of the French Republic he presented him with this medal. He then stepped smartly to the soldier or officer, touched him lightly on each shoulder with his sabre, pinned the medal on the left breast of his tunic, kissed him lightly on each cheek, shook hands with him, adding a few evidently commendatory words, then returned quickly to his place and called out the next one.

After the presentation of honors, the troops marched past the reviewing-stand, in which were the prefect and many civil and military officers. The American troops were given the post of honor, in the lead. Our troops looked very grim and business-like in O. D. uniforms and steel trench-helmets, carrying their rifles with fixed bayonets. They received their fair share of the applause as they swung along with a quick step and excellent alinement. The French troops followed, dressed in their picturesque uniforms. The whole made a very pretty sight; that will not soon be forgotten.

Getting back to our subject of life at the hospital, I feel that I must mention the fact that we had a most excellent mess. Prices of meats and vegetables are higher than in the States, but, thanks to the management of a most efficient "Officer's Mess Officer", we had very good meals at a dollar a day. Our mess-hall was decorated with Liberty Loan posters, to cover the otherwise severely plain boards. Strung across the rafters, were small Allies' flags, while over the two doorways we had groups of larger flags of all the Allies.

A mobile surgical team was formed from among the surgeons at the hospital, ready to leave at any time and for any place where the need was great. Gas-teams were formed, also, specially instructed, and ready to leave at any time for any part of the front or near the front, where the gas cas-



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A Red Cross Camp.

ualties were greater than the local force of surgeons and nurses could handle consistent with the really excellent service that our Government wants the troops to have. I feel that the Medical Department is gaining its fair share of credit in this war, as well as are the rest of our troops. My lucky star is still with me, for, I was chosen for one of these gas-teams, and I am eagerly waiting orders to go forward.

In an Army Hospital, the ward-surgeon is allowed perfect freedom in his method of treatment. He is responsible for the property therein, and, in general, is the law, so far as that ward is concerned. Second in command is the nurse. When neither the surgeon nor the nurse is there, then the ward-master is in charge. The ward-master's duties are many and varied. He must see to the proper policing (cleaning) of the ward, that the walking patients take their showers regularly, reports to get ready for the ward-surgeon, supplies and clean linen brought over to the ward daily and the soiled linen taken to the laundry, that urine, feces, sputum, and other specimens are taken over to the laboratory daily, care of the stoves, drink-

ing-water, and help in the serving of meals. He must see to it that all patients admitted while he is in charge are sponged off and put to bed between clean sheets. That the patient has drinking-water and a sputum-cup on the little bedside table, and that his temperature, pulse, and respiration are taken. He must be prepared, in the absence of the nurse, to assist at many minor operations, spinal puncture and paracenteses, dressings and enemas. In fact, the ward-master must be a male nurse as well as a good handler of men. These ward-masters are picked from the enlisted personnel. To help them master their many duties, a class was started, where for an hour three times a week some of our medical officers lectured to them and gave them practical demonstrations in bedmaking, giving of enemas, fitting splints, giving first aid, et cetera. In these talks, it was outlined to them that, as the first requisite of the medical department in time of war is the return of men as soon as possible to duty, much depending upon the intelligent co-operation of the ward-master.

At our hospital, we had as many as three chaplains at one time. An Episcopalian, a

Hebrew, and a Roman Catholic chaplain were here for some time, so that all desiring spiritual aid and comfort could obtain it. These chaplains usually were real men's men, good mixers, and well liked by men and officers alike.

While I was here, the Third Liberty Loan was floated. There was no direct soliciting of the A. E. F. The greater part of the Loan, and its pleasing oversubscription, was taken by the people at home. Had there been a campaign here, I have no doubt that a great many bonds would have been sold. There are none of us over here but that are willing and anxious



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Dugout built by men in training for foreign service.

to back ourselves to win, as we have proven by our subscriptions to the first and second loan. It is pleasing, indeed, however, to see the support that our people at home are giving us in the many phases of this war, not the least of which is this matter of buying bonds. The fact that the Third Liberty Loan was oversubscribed makes us who are fortunate enough to be in the Service more proud than ever that we are Americans. I often read of the pride of country that a person has when away from his own land in a foreign country, but, being somewhat of a homeguard, I had never before had the opportunity of experiencing this. I can tell you, though, in



DR. ROBERT C. MURPHY,
Lieut. M. C., U. S. A.
Author of the interesting articles on "The Making
of an Army Medical Officer."

all sincerity and from personal experience, that it is a glorious feeling.

ROBERT C. MURPHY,
1st Lt. M. R. C.,
Base Hospital 101.
In France.



Just Among Friends

A DEPARTMENT OF GOOD MEDICINE AND GOOD CHEER FOR THE WAYFARING DOCTOR

Conducted by GEORGE F. BUTLER, A. M., M. D.

Origin, Development and Use of the English Language

[Continued from December issue, page 946.]

IT is safe to affirm that all men of intellectual fiber, however imperfect their achievement in letters, desire to write well. Yet, though our literature teems with the noblest examples of felicitous expressions, touching a multitude of topics, and though our institutions of learning lay commendable stress upon English composition, the faculty of clothing our ideas in adequate diction is comparatively rare—preeminence in this art being among the choicest gifts of the gods, given to but few men to attain.

It sounds like a truism to assert that a prerequisite to writing well is, to *think well*. To cultivate a logical sequence of ideas and train the mind to precise methods of coordination and lucidity of reasoning is a momentous task; yet, upon this systematic basis of correct ratiocination, is founded all higher power of appropriate expression. It is readily perceptible that every mental operation is attended by an unconscious formulation of thought potentially utterable in articulated or recorded language. To think aright, therefore, predicates, of necessity, the private training of the intellectual faculties, the concrete energy of which is embodied in writing—an art of which speech is but the handmaid and accessory.

It is difficult to determine how far education, in the sense of academic training, properly subserves the attainment we seek. Not to multiply instances, the consideration of one master-mind—that of Shakespeare—will suffice to show that even rudimentary knowledge acquired in early years may develop into transcendent powers, 'the evolution of which defies analysis. True, this supreme excellence, which we are wont to term genius, annihilates preconceived notions of that which contributes in the larg-

est degree to the *ars scribendi*. Innumerable instances will occur, however, in which this same deprivation of "schooling" has failed to thwart the innate progress of assimilated thought or, so far as we can discern, impair the excellence of final attainment.

A thoughtful study of eminent authors, indeed, confounds the schoolmen. Hawthorne—to select a notable example—was far from fulfilling the academic requisites of sound learning; yet, he possessed a marvelous gift of utterance, in which the most delicate shadings of human passion, the subtlest phases of imaginative thought, and emotions whose delineation would seem too evanescent to be crystallized in tangible expression were happily portrayed. In a word, he sways us by the supreme mastery of *style* and his pages glow with the living personality breathing through them and permeating the atmosphere of his creative genius. For, as an illustrious French essayists has said, "style is the man," and, whether in Scott or Dickens or Thackeray, whether in Bolingbroke or Mill, whether in Ruskin, Emerson, Stevenson, Irving or Poe, or, indeed, any master of English expression, the writer's individuality shines forth and vivifies the offspring of his meditation.

Nevertheless, it is obvious that the impress of individuality alone fails to realize the demands of the most engaging style. Carlyle may be regarded as a great thinker rather than a great writer and the Teutonic emphasis of "*Sartor Resartus*" scarcely is to be accepted as a model of English diction, much as we admire its sturdy resolution, its titanic force, its virility. There must be an objective, as well as subjective, quality in all good writing—a sympathetic consciousness of other hearts and alien experiences, to enlist the reader's regard and captivate his imagination. It is impossible to read Bulwer attentively without experiencing a sense of pleasing, kindred acquiescence in the author's thought and

style. In him, as may be said of Scott, we are aware of the perfect naturalness that constitutes the cardinal motive of successful composition, divergent as are their methods and varied their resources of fiction. They strike the universal, not the personal chord, to which the heart of humanity, joyfully responds. In fact, it may be laid down as a general principle that, the more of universal interest and the less of self is injected into our literary productions, the more acceptable the result.

By this, it is not intended to imply that there should be lack of independent thought and speech, but, rather, that our style should be marked by the suppression of that accented egoism that mars the works of not a few able writers and sensibly detracts from the strength and charm of their performance. Women, it may be observed, are especially prone to this latent or perceptible weakness of intellect, and it is said that only the keen perception of Dickens, among the notable litterati of the time, discerned, by internal evidence, the true authorship of "Adam Bede," although "George Eliot" must be accounted, so to speak, one of the most virile writers of her sex. Better the tempestuous realism, the searchingly vivid, if coarse portrayal of human nature thrust upon us in Kipling, than the invertebrate maunderings of dubious fiction with which we at present are being surfeited and the mendicant appeals prompted by the unwholesome faculty of viewing life through the refracting medium of self-consciousness.

It is difficult to attain this winning simplicity of style, in which art and nature are so happily blended that their separate influences evade detection. We must regard the accomplishment, however, as the crown of literary merit, compatible alike with the most unpretentious effort and the loftiest flights of literary ambition.

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Henry James has said of Madame Recamier that, to portray the secret of her fascination, were as impossible as the description of a perfume. It may be equally averred of the subtle essence of an engaging style, as of Emerson's or Lowell's, that its rarest spell is evanescent; tangible as are its lofty impress, its exceeding beauty of thought and expression, and its luminous intelligence. We all have felt the easy, refined attractiveness of "Reveries of a Bachelor"; it baffles scrutiny to ascertain pre-

cisely where lies the unobtrusive exercise of the power than binds us to the author's philosophical reflections, investing the simple accidents of daily life—the haunting misery of love, the open fireplace, the reflective pipe of tobacco—with a witchery surpassing definition. Still, we can not fail to perceive that in this particular instance the writer's meditative mood awakens an answering sympathy in the mind of the reader. Not only has the author something to say, but, his speech is freighted with the feelings common to mankind, and all men become responsive to its genial influence. Lamb, Hazlitt, De Quincey, Warner, and a host of others, in varying degree and with individual force, reflect this kindly interest in the fancies and emotions which are the heritage of mankind. They touch the universal heart, and we listen gladly to them.

Reference still remains to be made to the wonderful writings of the illustrious jurists and publicists who have rendered homage to their mother tongue while inculcating the most ennobling principles of truth and freedom. A page of Hamilton, of Webster or Choate leaves upon the mind somewhat the impression of having stood within a classic temple, rendered sacred by the exalted presence of immortal deities and the lingering echoes of oracular wisdom. If their diction be unattainable by ordinary mortals, the allurement of their majesty of thought is none the less real, and of no less vital moment to us in molding the essential elements of the worthiest style. Their peculiar power appertains to the strength of genius; yet, the reflective student may assimilate something of their grandness, something of their fine sincerity and ardor of conviction.

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I have cited a few instances of eminent authors, with the definite purpose of assertion that in association with great minds, through diligent perusal of their works, will be found the surest means of acquiring, albeit imperceptibly, the art of logical as well as refined and cultivated expression; in a word, of writing well. The retarding influences of immediate environment can never obliterate the grander impetus given to our thoughts by communion with the accepted masters of English prose. Familiarity with the glorious Elizabethan or the less brilliant although still commanding achievements of the Victorian era of

our literature leaves an indelible impress upon our thoughts and surely is reflected in our speech and "written tongue." "Read few books well" said wise Horne Tooke—the mischief of a prevailing mediocrity of intellectual attainment, as manifested in daily intercourse with fellowmen, and the average production of current literature is, that, as a rule, people read little or nothing of permanent value for higher mental development or the formation of a correct literary style. Better the habit of careful meditation than subservience to the ephemeral writers foisted upon us by a multitude of ignorant purveyors styling themselves publishers. In intellectual, as in all honorable exercise of our highest faculties, quality ever must rank above quantity, and no perfunctory haphazard acquisition of literary knowledge, although praised by the multitude, can justly be comparable with conscientious labor and discernment.

It will be inferred from the foregoing observations that the *art* of creditable writing always is attainable, even under circumstances apparently least favorable to success. The Bible, Shakespeare, "Pilgrim's Progress," "Vicar of Wakefield," the intellectual grace of Irving, Prescott, and Motley, the stately philosophy of Hume, the solidity of Burton, the analytical force of Bacon, together with perhaps a dozen other standard authors, constitute a small, yet, comprehensive library, in which the rarest meditations of the world's later intellects are enshrined. Should classicism claim our attention, a few Greek and Roman authors suffice to shape in our minds the clear, easy refinement of thought and feeling that characterized their epoch. However, our purpose in study must be rationally pursued and all lesser influences banished from the mind, that the crowning result may be commensurate with our ideal. "Pickwick" and "Dooley" may answer well enough for relaxation; but, the august court of letters must have its laureate as well as its clown.

It is pertinent here to refer briefly to an immediate source of literary instruction, from which the careful reader may derive indubitable profit, namely, the editorial pages of our best journals. Notwithstanding the cruel lapses of popular fiction—culpable alike in their motive and their result—a redeeming feature of our current

intellectual life is to be found in newspaper leaders of signal merit, fully equal to style to the best magazine literature, and, from the necessity of condensation, presenting admirable examples of concise, logical reasoning combined with discriminating observation of the leading events of the day. There is, to be sure, a certain "newspaper English," to be regarded as deplorable, for its sins of commission, and little likely to advance the intellectual standard of the reader or to encourage the faculty of praiseworthy expression. The editorial sanctum, however, usually is purged of this baneful element in our daily press, the dominating thought of the journal demanding well-considered and appropriate utterances, and the leading articles frequently disclosing ripened powers of insight and expression unsurpassed by professional essayists. Indeed, although I have credited this superiority only to prominent journals—seeing that they are more cosmopolitan and, therefore, more widely perused—it is a matter of pride to reflect that even the obscure country newspaper is capable of similar excellence, the tone and dissemination of general education in America naturally fostering a broadly diffused, more ample knowledge, and more acute observation.

Having, thus far, regarded the material from a careful consideration of which we learn to command a felicitous style, there remains the vital question as to choice of models in verbal selection. In a language comprising 120,000 words or more, gathered from many sources, ancient and modern, and embodying many civilizations, it is an arduous task to decide how far the incongruous elements of the English tongue shall be impartially combined. A cursory examination shows that the most powerful passages of Shakespeare, at times, are largely exclusively Saxon. Take, for example, the familiar:

"How far that little candle throws his beams!
So shines a good deed in a naughty world."

Or;

"This, above all, to thine own self be true,
And it must follow, as the night the day,
thou canst not then be false to any man."

Or, this advice of Constance to Bertram:

"Love all, trust a few, do wrong to none."

In all these seven lines, there are but two Latin words, "candle" and "false," the rest

are pure Saxon, imparting, as elsewhere, to Shakespeare's thought indescribable vigor, without abruptness, and beauty of expression, without weakness. "Robinson Crusoe" may properly be defined as an English classic—its phraseology is absolute Saxon from beginning to end.

As a desirable counterpoise to the terse emphasis of the Saxon style, the influence of classical literature has been adduced; the claim being made that the more marked refinement of English diction is traceable to the impress of Latin, through the Norman-French. It can not well be denied that the writers whom the world has been readiest to term "accomplished" have drunk deeply of the Pierian springs and that their classicism adds to the natural uncouthness peculiar to the Saxon idiom a grace and charm which literature never will consent to relinquish.

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Whatever medium we choose, though, let us rigidly foreswear the untutored conglomeration of inchoate thoughts suggested by *slang*—a mode of expression destructive of common sense, vulgar in its origin, and a repudiation of that decorous interchange of thought among mankind which it has been the zeal of centuries to establish. Let us, for example, take a bit of Chicagoese: "Wishing to see the elephant, he struck the town; bucked the tiger; rushed the growler; hit the pipe; ran up against a bunco-steerer; and, having blew in his dough, got up on his ear, but, after chewing the rag awhile, came down from his perch and screwed his nut." This, one regrets to say, is readily intelligible to a supposedly educated and refined portion of the community. It is a travesty upon truth to dignify so low a jargon by the appellation of language, and its exaggerated, yet, not unfamiliar, form reveals the depths to which colloquialism may descend.

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There are hints for practical use in the art of writing too obvious to call for ample reference, yet, deserving of passing mention. It is superfluous to say that, without a thorough knowledge of syntax and

familiarity with the canons of composition, no writer can hope to obtain a higher level than that of dull mediocrity. He may toil forever, yet, never emerge from hapless oblivion.

Supposing, however, a facility and pre-vision acquired by proper training, it is always pertinent, before putting pen to paper, to ask ourselves seriously whether we have, really, anything to say that, beyond the paltry sphere of private consciousness, would commend itself to the feeling or intelligence of others.

Again, we should never be deluded by the fond, albeit purblind, approval of friendship, but, rather, court the most uncompromising critic, that we may duly estimate our performance, be rudely torn from cherished mannerisms, and see our idols shattered, so that we may attain "the true faith." It is heroic—this ruthless iconoclasm—but, it does us good to know that confused or fallacious metaphor, incongruity of ideas, the tinsel and glitter of poetic phrasing devoid of perceptible meaning, together with verbosity, redundancy of thought, poverty of language, and evident straining after effect, all preclude the highest attainment. Even the flattering unction of a publisher's check should fail to lure us from strictest scrutiny of our literary ventures. There never was gem so skilfully cut but its facets might shine yet more brilliantly at the touch of a clever lapidary.

In conclusion, I would encourage the belief—too seldom taken at its full value—that there is the attempt at literary composition, an intellectual fervor, a gentle passion for worthy attainments, and an ennobling love of pure art which amply atones for momentary, or even lasting, defeat, and cheers and sustains us in an effort to which we are bidden by the highest behest to which our mental faculties can respond. The transport of worthy endeavor, the glow of studious pursuits, the humblest fruitage of our aspiring toil are, of themselves, sufficient recompense; for, was it not in our listening ear, was it not in some beatific vision that the Angel of the Lord whispered, "Write"?



Among the Books

WEBB-JOHNSON: "TWILIGHT SLEEP"

Painless Childbirth in Twilight Sleep in the East. By Cecil Webb-Johnson, M. B., Ch. B., Capt., R. A. M. C. London and Calcutta: Butterworth & Co. 1918. Price \$1.25.

Books on the subject of painless childbirth necessarily must be of general interest, especially as the method of the socalled "twilight sleep" bids fair to emerge from the undeserved contumely that was accorded to it by many theorists and also by men who had tried and studied it either not at all or with a faulty technic. It can not be denied that the dread of the pain of childbirth has become an actual menace to the birth rate, to say nothing of the fact that in many cases, as a result of the pain, fear and worry, many women emerge from parturition physical and mental wrecks. The demand for an unobjectionable method of rendering childbirth painless or nearly so, therefore, is justified and it can not serve any good purpose merely to condemn a method because certain disadvantages are attaching to it. It would be trite to say that everything has its advantages and disadvantages, its light and its shadow; yet, this fact seems to be overlooked by those who demand from a method of painless childbirth that it should be without any disadvantages whatever. The wise physician will, in judging of any method advocated for his consideration, keep an unbiased mind, remembering, as the author says in the introduction of his book that: "There is a principle which is a bar against all information, which is proof against all argument and which can not fail to keep a man in everlasting ignorance, this principle is, contempt prior to examination."

The body of Captain Webb-Johnson's book on "Twilight Sleep in the East" naturally is devoted to a study of the method with the details of which most physicians are fairly familiar but which, nevertheless, will prove good reading. In enumerating and contrasting the disadvantages and advantages of "twilight sleep", the author ar-

rives at the conclusion (p. 92) that most of the disadvantages—which are few, moreover, can be rectified or avoided and that they are insignificant when compared with the advantages of "twilight sleep" in childbirth. The author justly says that, if a medical man has neither the inclination nor the time to give the proper treatment, the only honest course for him to adopt is, to refuse the case, and not give an apology for "twilight sleep", thus bringing discredit on the genuine method.

As for the method to be followed, Captain Webb-Johnson objects to any definite scheduled technic, insisting that each patient should be treated individually in accordance with observation in her own case. He maintains that it is only by the systematic application of the memory test that the minimum effective doses can be gauged and administered. It is not here the place to describe the technic advocated by Captain Webb-Johnson. However, his little books is deserving of careful study by the general practitioner as well as by the obstetrician. It is distinctly a valuable contribution to medical literature.

OWEN: "TYPEWRITING"

The Secret of Typewriting Speed. By Margaret B. Owen. Chicago: Forbes and Company. 1918. Price \$1.00.

While it hardly can be assumed that any physician will want to fit himself to qualify for the world's typewriting-speed championship, a book giving the personal experiences and opinions of one holding that exalted position must be of general interest. Moreover, the use of the typewriter has become so universal and—fortunately—physicians have taken up typewriting so widely that, being mostly selftaught, they will indubitably receive gratefully a method by which they can fit themselves to use the typewriter properly; correct use of any apparatus being an essential condition for good use.

Miss Owen's little book has all the charm of personal experience, conviction and en-

thusiasm. She writes easily and fluently; often her style is "chatty" and she appeals to her readers as one knowing perfectly what she is talking about, while her own wonderful success is explained and reduced to its simple elements: perseverance, industry, concentration; so that it seems as though anybody must be capable of becoming at least a good operator on the typewriter machine by studying the little book carefully. Miss Owen occasionally indulges in epigrams, and one particularly has attracted the Reviewer's attention, it being so good and true as to be applicable to everybody and to everybody's business. It is: "Never be satisfied with your self! Always be discontented with yourself! Always be discontented with your present success and strive ever for higher things."

BLAKISTON'S VISITING LIST

Blakiston's Physicians Visiting List has made its annual appearance for the 68th time, and, in addition to the usual visiting-list, it contains, tables of information on the treatment of asphyxia and apnea; also a dose-table and other useful information. Many physicians find these old-fashioned visiting-lists convenient, and they will want to provide themselves with the new edition for 1919. The book is published by P. Blakiston's Son & Co. Price, according to style, \$1.25 to \$2.50.

"THE MEDICAL CLINICS OF NORTH AMERICA"

The Medical Clinics of North America for July is a New York number. It contains, among other interesting communications, one by Dr. William H. Park, of the laboratories of the New York City department of health, devoted to practical immunization against diphtheria. Two other important contributions are the one by Dr. Walter L. Niles, on subacute non-tuberculous pulmonary infection, and the one by Dr. Charles B. Slade, on the relation of pulmonary tuberculosis to general practice. At the present time, Dr. E. Libman's clinic on the clinical features of subacute streptococcus (and influenzal) endocarditis in the bacterial stage will prove of special importance.

The Medical Clinics of North America is published bimonthly by the W. B. Saunders Company, at the subscription price of \$10.00 per year. It belongs to the

practical and helpful publications that are of great interest to the general practitioner.

"PRACTICAL MEDICINE SERIES"

The fifth volume of the "*Practical Medicine Series*" for 1918 contains reviews of the literature on gynecology and on obstetrics. As we look through the book, two articles—on the care of feet in pregnancy and on a new shoe for wear in pregnancy—arrest our attention and impress us as emphasizing a most important point in the hygiene of pregnancy. This is just one instance picked out at random from among the many good things that occupy the reading-pages of this little volume.

Volume VI of "*The Practical Medicine Series*" for 1918 is devoted to pharmacology and therapeutics, being edited by Dr. Bernard Fantus, and to preventive medicine, this section being edited by Dr. Wm. A. Evans. The volume sells separately for \$1.60.

The "*Practical Medicine Series*" is issued in 8 volumes during each year and covers the entire field of medicine and surgery. Each volume is complete on the subject of which it treats for the year prior to its publication. The price of the series of 8 volumes is \$10.00; the present volume sells separately at \$1.60. It is published by the Year Book Publishers, Chicago.

KOLL: "MALE URETHRA"

Diseases of the Male Urethra. By Irvin S. Koll, B.S., M. D., F.A.C.S. Illustrated. Philadelphia and London: The W. B. Saunders Company. 1918. Price \$3.00.

Here is an interesting little monograph on diseases of the male urethra, including impotence and sterility, which not only is to serve genitourinary specialists, but, also presents much useful information for the general practitioner. The book is well gotten up, beautifully illustrated, and the subject is well presented.

DEANE: "GYMNASTIC TREATMENT"

Gymnastic Treatment for Joint and Muscle Disabilities. By Brevet Col. H. E. Deane, R.A.M.C. Illustrated. London: Oxford University Press. 1918. Price \$2.50.

Here is a little volume that describes, in brief and concise language, various exer-

cises that are suitable for the treatment and overcoming of joint and muscle disabilities. The exercises are those employed in various British war hospitals for the purpose of fitting wounded soldiers for discharge and for the resumption either of their military duties or, then, of useful civilian occupations. There are several interesting illustrations and, altogether, the little book is well worth while.

LOWRY: "WOMANHOOD"

Preparing for Womanhood. By Edith B. Lowry, M. D. Chicago: Forbes & Company. 1918. Price \$1.00.

Dr. Edith B. Lowry has distinguished herself during the last few years by producing some of the most acceptable books on sex hygiene and other related topics, as they may be taught to boys, to girls, to women or to men. The present book is intended for girls from fifteen to twenty years of age, and discusses health, home-making, and everything that girls need to know in order to become happy and healthy women.

The author's treatment of her topics always is simple and straightforward, yet in dignified and suitable language. The Reviewer has always been favorably impressed on reading her various books and recommends this latest one from Doctor Lowry's pen cordially.

WARBASSE: "SURGICAL TREATMENT"

Surgical Treatment: A Practical Treatise on the Therapy of Surgical Diseases for the Use of Practitioners and Students of Surgery. By James Peter Warbasse. In Three Volumes with 2400 Illustrations. Vol. II. Philadelphia: W. B. Saunders Company, 1918. Price \$30.00 per set.

The second volume of "Surgical Treatment", which as the Reviewer has announced before is to be completed in three volumes, deals with the treatment of injuries and diseases of the head, of spine, of neck, of thorax, of breast and abdomen. Like its companion, Volume I, the book is mechanically perfect, well printed, well and profusely illustrated and the text is in accordance with the latest and most approved methods. While much of the material nec-

essarily is highly technical and specialized, the Reviewer is impressed with the fact that the general practitioner will find in this work much serviceable guidance for the problem with which he has to deal in his practice.

PRINCE: "ROENTGEN TECHNIC"

Roentgen Technic (Diagnostic). By Norman C. Prince, M. D. With seventy-one original illustrations. St. Louis: C. V. Mosby Company. 1917. Price \$2.00.

This small volume has been prepared particularly for those general practitioners who have seen fit to install x-ray equipments along with the numerous other apparatus necessary in helping them to best care for those who come under their observation.

It is to be kept in mind that the book is devoted entirely to the diagnostic use of the Roentgen rays. It is freely illustrated and contains detailed directions for preparing the patient for examination.

JOHNSON: "FILLING TEETH"

Principles and Practice of Filling Teeth. By C. N. Johnson, M.A., L.D.S., J. D.D.S. Illustrated. Philadelphia: P. Blakiston's Son & Company. 1918. Price \$3.00.

This volume, of course, will appeal particularly to our dentist friends. The Reviewer confesses to being entirely unable to judge of its excellence. However, he is inclined to take on faith what this particular author says.

GULICK: "MENTAL DISEASES"

Mental Diseases: A Handbook Dealing with Diagnosis and Classification. By Walter Vose Gulick, M. D. Illustrated. St. Louis: C. V. Mosby Company. 1918. Price \$2.00.

The Reviewer can do no better than reproduce the introduction to this book by Dr. W. T. Williamson, which is as follows:

"This little book is no superfluity; born of the wants we all have for concise, digested information, it institutes a response to that need. Doctor Gulick felt the demand as others have, but, he happily responded. The physician in court, or conducting office or public examinations of the insane, or

unexpectedly called upon for diagnosis in private practice, will accept this book with relief. It is original and pleasing, not a mere compilation, and has much pure Anglo-Saxon directness and clearness. It should be welcome to the profession."

"ABSTRACTS OF WAR SURGERY"

Abstracts of War Surgery: An Abstract of the War Literature of General Surgery that has been Published Since The Declaration of War in 1914. Prepared by the Division of Surgery, Surgeon-General's Office. St. Louis: C. V. Mosby Company. 1918. Price \$4.00.

The substance of this book was prepared originally for the Division of General Surgery of the Surgeon-General's office, for use of instructors in the Army Surgical Schools and of the surgical chiefs of the war hospitals. Its wider distribution in printed form makes available to the members of the medical profession many of the valuable lessons in the past four years.

WITTICH: "INFORMATION FOR THE TUBERCULOUS"

Information for the Tuberculous. By F. W. Wittich, A. M., M. D. St. Louis: C. V. Mosby Company. 1918. Price \$1.00.

This book answers the questions which frequently arise and which are constantly asked by hundreds of patients when first learning that they are tuberculous and during the course of treatment. The author's vast experience in the field of tuberculosis, gained first while a patient of no light infection at Saranac Lake, and later as physician and superintendent to some of the leading sanatoriums for tuberculosis in the country, has enabled him to get very close to the patient and to understand what is wanted in the way of information.

RINGER: "CLINICAL MEDICINE FOR NURSES"

Clinical Medicine for Nurses. By Paul H. Ringer, A. B., M. D. Illustrated. Philadelphia: F. A. Davis Company. 1918. Price \$2.00.

The author attempts to present the information on medical diseases, as their knowledge is required by nurses, in sufficient detail for the purpose without, on the

other hand, dealing with them as minutiously as do textbooks on medicine. The student is taught what and how to observe and interpret, it being kept in mind, though, that the nurse is to act as aid to the physician, not as an independent medical advisor. This little book strikes us as well written and we believe that the intention of the author has been fully carried out.

PAGE: "A-B-C OF AVIATION"

The A-B-C of Aviation. By Captain Victor W. Pagé, Sig. R. C., A. S. New York: The Norman W. Henley Publishing Company. 1918. Price \$2.50.

To physicians who are interested in aviation, Captain Page's latest book will be welcome. The author is remarkably well qualified to write on this subject through long personal experience and for which he was fitted previously with close study and knowledge of motors and horseless vehicles.

ADLER: "HISTOPATHOLOGICAL TECHNIC"

Compendium of Histo-Pathological Technic. By Emma H. Adler. New York: Paul B. Hoeber. 1918. Price \$1.25.

This little compendium is intended to supply the student untrained in laboratory work with a brief and handy account of the methods that have been found most useful by the author. It will primarily prove of service to the beginner and especially to those physicians who without much laboratory experience desire to take up this very fascinating work.

"UNITED STATES ARMY X-RAY MANUAL"

United States Army X-Ray Manual. Authorized by the Surgeon-General of the Army. Prepared under the Direction of the Division of Roentgenology. 219 Illustrations. New York: Paul B. Hoeber. 1918. Price \$4.00.

The fact that this x-ray manual is authorized by the Surgeon-General of the Army and has been prepared under the direction of the Division of Roentgenology is sufficient commendation as a strong introduction. The manual may be accepted as being in accordance with the best that is known on the subject.

Condensed Queries Answered

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report their results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

Answers to Queries

ANSWER TO QUERY 6403.—“Formication”. Regarding Query 6403 in the October number, page 802, Dr. L. M. Young, of San Francisco, California, suggests that the symptoms of formication described by our correspondent tally with those of “urticaria fugax”, or flying urticaria. This, Doctor Young adds, is the creeping, fleeting sensation that might suggest vermin (“cooties”), but, which, in his opinion, would be due to food idiosyncrasy, especially to pork products, or to the continued ingestion of meats in general.

In recent years, we have become familiar with the urticaria developing through an intolerance of certain food substances, more especially those of vegetable origin, the most manifest instances being an intolerance

of strawberries, tomatoes, and various similar articles. The intolerance of eggs and even that of milk naturally must be classed in the same category. Since this anaphylaxis may manifest itself in part in the development of a severe urticaria, sometimes with violent itching and distressing sensations generally, it is fair to conclude that the same occasionally may occur very much attenuated in degree in cases where either the intolerance to certain foods is only very slight or in which very small amounts of such substances have been partaken of. The Query Editor believes that Doctor Young’s tentative diagnosis is a very probable one and should like to receive the expression of other opinions on the subject.

Queries

QUERY 6409.—MORE INFORMATION WANTED.—E. G. H., Iowa writes as follows: “I have a patient who does not complain of anything except of a pale skin. The blood, according to examination, is good.” And then the doctor adds, “Kindly advise me as to diagnosis and treatment.”

Now, this is where the Query Editor enters his “kick.” So many physicians make similar requests and many of them demand from us even more impossible things, such as, for instance, to advise them concerning “the best treatment for goiter”, the “best treatment for indigestion”, and similar problems of undefined nature. All this despite our constant endeavor to impress upon our readers’ minds the futility of attempting to treat disease-names in-

stead of studying their patients’ symptoms characteristic of certain diseases.

The Query Editor is glad to receive requests for help and counsel. It gives him much pleasure to study and enter into the problems presented to him by his correspondents and to advise them to the best of his ability. But, the Query Editor is only a physician. He is not the Almighty and he can not *sense* just what ails your patients, doctor, nor can he give you intelligent advice unless you describe clearly and in detail the conditions observed by you.

When asking for aid in any problem that may puzzle you, remember that the Query Editor can not see your patient, but, that he must depend upon you for a description of his patient’s condition. Make it complete.

Remember that we can not see your patients, thus losing your advantage. Therefore, tell us all you know about your cases. Only then can the Query Editor's advice be worth anything at all.

—

QUERY 6410.—W. N. H., Illinois, writes about a married woman, age twenty-nine years, father and mother both alive and in good health. She has three adult brothers working in a coal mine and part of the time on a farm. Nativity, American. Height, 5 feet; weight, 100 pounds; physique, fairly well developed, but, small; complexion, light. Married six or seven years; never been pregnant.

Subjective symptoms: Very severe headaches, just before, during or following menstruation; headache begins in back of head and extends all over her head. Complains of feeling languid and weak. Lost 7 pounds in weight in the last six months. Short of breath on the least exertion; no appetite; complains of indigestion, insomnia, hot flashes and free sweating; never rested, always tired; dizziness; pain in small of back.

Objective symptoms: color, normal, perhaps a little anemic. Tongue clear; teeth in good condition; no eye trouble; ovaries tender; vaginal examination reveals nothing but tenderness; says coitus is painful. Heart and lungs normal; bowels constipated. Urinary examination a month ago; specific gravity 1040, cloudy, slightly acid, no sugar or albumin; amount excreted in twenty-four hours, one pint.

"Treatment: I endeavored to increase the urinary output by insisting upon drinking all the water she could, and gave her a buchu, juniper, and potassium acetate mixture, also iron, quinine, and strychnine. I regulated her bowels with the Hinkle tablet, and gave sodium bromide for nervousness.

"Urinary examination a week later: total amount one quart; specific gravity 1030; color light-straw, cloudy; reaction, acid; no albumin or sugar. She claims to feel somewhat better; headache not so severe, appetite slightly improved. This urinary condition did not look right to me, hence I sought your assistance. Any suggestions you now may make will be appreciated. I will say that my provisional diagnosis was, neurasthenia, but, from your laboratory-report, I am inclined to believe there may have been, some years ago, an acute

urethritis and that the symptoms there now are the sequels."

The principal impression made by a reading of this excellent account of your patient is that of a profound toxemia existing.

We have here a woman, twenty-nine years old, 5 feet tall, weighing 100 pounds, which is somewhat under weight; although married about six years, she has never been pregnant. There is, evidently, some sexual irregularity, which may or may not be purely mental; yet, the fact that conception has never occurred makes us suspect the possibility of a very tight os uteri or, perhaps, a malposition of the womb. The tenderness of the ovaries may be owing to an insufficient menstrual flow, leaving the ovaries congested and unrelieved. By the way, you do not give any information on the character of the menses themselves, nor do you say whether there are abdominal pains during those periods.

The patient is constipated, has no appetite, does not sleep, always feels tired. She is dizzy, has hot flashes, yet, heart and lungs are found normal. These symptoms are of toxic nature, and the toxemia may be intestinal in origin. On the other hand, they may be of bacterial source, since the uranalysis disclosed many colon-bacilli and many staphylococci.

It would be interesting to know something about the mentality of this patient. Is she fairly well educated? Is she intelligent? Does she make any subjective observations and comments concerning her condition? Is her married life happy, that is, are she and her husband congenial? Are his habits good? All these points may have to be considered.

Now, as to the treatment of this patient, we believe the first requirement is, to secure a complete and thorough emptying of the bowels. Better start her on calomel and podophyllin, 1-6 grain each dose every hour until six doses are taken. Then a full dose of a laxative saline say, one tablespoonful in much water. This dose may be called for two or three times a week for a week or two, until the constipation is fully relieved; then the bowels may be kept clean by means of phenolphthalein tablets in sufficient dosage, always trying to reduce the dose to the smallest amount required.

In the meanwhile, the diet should be simple and easily digested. Milk, of course, is a good article of diet, but, it should be

made more acceptable by adding a Bulgarian-bacillus culture; this, for the purpose of reducing the probable intestinal fermentation caused by bacterial action.

The intake of fluids during the twenty-four hours should be 4 quarts a day for some time. We do not believe this would produce an excessive strain upon the urinary organs, for the reason that there is no evidence of any organic changes in the kidneys.

The best articles of food to be prescribed are, in addition to milk, cereals, including bread; starchily foods, fats (butter), meat, and eggs in moderation, much fruit, preferably fresh. The patient should be encouraged to select her food with a view to stimulating the appetite. It might be advisable to have her invited out frequently, because, as you know, doctor, a woman who cooks her own meals often does not care to eat them, not because they are not good, but, because she had to cook them and, therefore, wants to be through with them.

It is probable that a course of nuclein solution, preferably administered hypodermically, would help this patient materially. Give the contents of one ampule twice a week. Nuclein solution that is made especially for hypodermic injections produces neither swelling nor reaction; it is borne well and exerts a very satisfactory influence upon the debilitated organism.

It is possible that the severe headache ushering in and accompanying the menstruation may be moderated or even relieved by a course of Buckley's uterine tonic pills, three times daily for a month, preceding the menstrual period. It also is possible that, after the complete cleaning out here advised, this headache will not make its appearance at all.

We have the impression that this patient requires a whole lot of encouragement and suggestive treatment. If, as we assume, she has absolute confidence in you, you will be able to do very much for her by assuming a calm and confident attitude, assuring her that you will be able to benefit her, without, however, promising a definite cure, even though we do believe that this woman can be cured.

We should like to be quite certain of the absolutely normal condition of heart, lungs, and uterus. Please, repeat your examination two or three times, if necessary, listen to the chest-organs at intervals, with the

patient sitting up and lying down; ascertain her blood pressure, both systolic and diastolic and inform us of any possible nervous symptoms, excessive nervousness in speech, possible twitching of hands and eyelids, and of fussiness. Does she look you straight in the eye, or do her eyes shift during conversation? What is the condition and reactivity of the pupils?

There are so many things that we should look for if we had the patient before us that a complete questionnaire would constitute a lengthy article; however, we believe that we have made sufficient suggestions for you to go by and to start your patient on the road to recovery.

It may be possible to counteract the existing bladder infection by administering a bacterin containing the offending bacteria (*coli* and *staphylococci*). Undoubtedly, a tonic, possibly, iron citrate hypodermically, also might be of great value. We have learned to depend upon this in certain cases, in preference to the pills given by mouth, although in your case very probably the combined arsenates with nuclein would prove very useful, by creating a feeling of wellbeing, improving the appetite and the condition of the blood.

We have been tempted to enter into the discussion of this case at rather unusual length for the reason that these patients suffer so much—needlessly; that their problems can be solved by careful and persistent study, and that a physician who devotes himself single-mindedly to the necessary, although onerous, work, surely will be successful.

You can not expect to derive adequate financial returns from your attendance upon a case like this, because the patients rarely realize how much work it involves. Nevertheless, there will be satisfaction for you in knowing that you have accomplished something definite.

QUERY 6411.—J. L. D., Oklahoma, desires to know the reasons for the backward development of a little American girl three years of age, now under his care. Her delivery was natural. "She has had none of the diseases of childhood—Whooping-cough, mumps, scarlet-fever—except measles; and I am not certain that she had that. Indeed, she has had no illness except a severe pneumonia when two years old, which resulted in perfect recovery. Has no heart lesion or anything unfavor-

able. She has been constive throughout life, thus necessitating some sort of aperient. But, the parents are very intelligent and never let her go more than two or three days without resorting to whatever means may be necessary to secure action. Often they must give two or more tablespoonfuls of castor-oil or a compound cathartic pill to get results. They used the compound cathartic pills when the child was only two years of age, this insuring only one action.

The girl is well nourished, well developed physically, plump, but, not too fat, and has a fair skin and perfectly healthy appearance. She has always had a good appetite and good bodily nutrition.

"Now as to her intellectual development: the little girl first sat alone, unpropped, at about eighteen months, but, first stood alone and walked only recently, say, at about 2½ years. But, even now, she walks very little and is quite awkward, seeming to have little control of the ankles. She has never talked or uttered any word except "pa, pa, pa, pa, pa," and does not seem to realize what this means. She seems, however, to be able to recognize her parents. Her head makes a constant nodding movement, as if negating some question. This has been observed at least for the past two years; but does not occur during sleep.

"Chorea is one condition suggested to me by the nodding movement of the head.

"The child does not seem at all nervous; is not fretful, peevish, or fractious, but, is what one would term a 'good' child.

"The family history is negative. I have found nothing in the way of any specific diseases, insanity or anything that I think would cast light upon this case—not on either side of parentage, in uncles or aunts, unless this might afford a clue, that the mother and all her mother's sisters have a slow and 'long' speech, as one would say.

"The parents are at the head of the society of their little town, the father being a banker, and are anxious to know whether anything can be done to alter the condition."

The problem that you submit to us relative to your little patient is a difficult one, because we labor under the disadvantage of not being able to see the child.

From the history and account that you give, we are under the impression that the child is suffering from the results of hypo-function of the thyroid gland, possibly also from a deficiency of some of the other hormones. A slow development, physically and intellectually, and an apparent inability to realize and appreciate things often is associated with thyroid deficiency and is seen most pronouncedly in cretins. This view seems to be supported by the apparent sluggishness of the bodily functions in general, since, for instance, it calls for what might be called heroic treatment to get the baby's bowels to move.

We suggest that you put this child on thyroid medication, starting with 1/12 grain doses (tablets) of thyroid gland, which may be given twice a day, carefully watching for untoward effects. These would take the form of rapid heart-action and manifest nervousness. If, at the end of a week this dosage is borne readily, you might increase it to three doses daily; then we should continue these three daily doses, but, increase the dose by 1/12 grain in the twenty-four hours after every week.

We believe that possibly this treatment may have a favorable effect, secondarily, upon the function of the bowels. We confidently expect it to influence decidedly the physical and mental development. We are advocating very small doses to start with and an extremely slow increase in these doses, for the reason that we desire to avoid any possibility of excessive function or stimulation.

The positive results of this treatment would take the form of greater independence in action, for instance, of walking; also in a more rapid intellectual development, possibly a stimulation of the speech-centers.

We should be very much interested to hear from you again, in a month or two from now, concerning this little patient.



The American Journal of CLINICAL MEDICINE

Dependable Therapeutic Fact for Daily Use

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Progress or Retrogression?

IN one of the leading medical journals of the country, the following two items were found, which deserve mention. They are as follows:

Argument never settled anything. How calm and collected is the man who has the facts! I "think" doesn't weigh much.

A wise old man was Oliver Ding,
By few words was he moved,
He never would believe a thing
Until it had been proved.

According to this mode of reasoning, it would be futile to attempt any investigation or to deal with any problem whatever "until it has been proved", that is to say, until it has been *definitely* settled. It would be exactly like forbidding Tommy to go into the water until he has learned to swim.

The absurdity of such an attitude is self-evident and, according to its logical conclusion, it precludes any investigation, study, and endeavor looking to progress or improvement. It was the accusers and judges of Galileo that, like the wise old man Oliver Ding, would not believe a thing that had not been absolutely proved.

Since, to their own limited minds, the learned Galileo could not offer the proof that the earth journeys around the sun, instead of the reverse, Galileo was forced to recant and to do penance for daring to believe things that had not been "proved". Similarly, the medical leaders of his day refused to accept Harvey's demonstration of the circulation of the blood, denying that it had been proved. The conclusions drawn by Edward Jenner from the results of his observation after inoculating the boy James Phipps, from material obtained from cowpox-pustules from the hands of the dairy-maid Sarah Nelmes, were fiercely combated by the medical leaders of the day, who refused to believe a thing until it had been "proved"; and the same fate was accorded to Servetus, Semmelweis, Holmes, Pasteur, Lister, Koch, and all the rest of "innovators" that dared to strike out independently along new lines of thought and in new directions of practice.

We submit that the man who refuses to consider possibilities, even though they be

not definitely proved, is one of those that remain in a rut all their lives, who are afraid to progress lest they lose themselves in the deep waters of unorthodox teachings; who fear to think independently, preferring the easier and less onerous, if less glorious, part of those that follow well-established leaders.

For our part, while we are not exactly constantly eager for new things, in the manner of the Athenians of old, we can not believe that our own wonderful era has attained and possesses all that is worth knowing. There is so much to be learned, so much to be discovered, that we prefer to maintain an open mind for new things that may be presented to our understanding; tentatively, perhaps, and, before they have been proved. We fully appreciate, that there are many facts that are matters of course today, but, were strange, unproved, and even improbable or impossible but on the yesterday.

The sentiments expressed in the two items introducing this editorial are reactionary in their tendency and injurious to every hope of progress. It is to be deplored that they should have found an approved place in a prominent and leading medical journal.

Every time you spend a nickel, a healthy dollar must work four hundred days to earn that five cents.

THE INFLUENZA TOLL OF DEATH

Although we have grown indifferent to the influenza epidemic, because we have become accustomed to having it with us, we should not forget that this malady still exists and, as a problem, is still unsolved. While the terrific toll of death is less now than during the months of October and November, it still is too large. Between September and January 1, there occurred in Chicago 10,748 deaths from influenza and pneumonia; in New York, 23,622; in Philadelphia, 13,502. In the last week of December, there were 439 deaths from this cause in Chicago.

The exact cause of influenza still is a mystery, but, there are available, as we know, really effective measures and remedies for arresting its spread and preventing complications. Some of these are discussed in this number of CLINICAL MEDICINE. We hope that the symposium upon this topic appearing on other pages,

of this issue, will be studied carefully and commented upon freely and frankly by our readers. We shall, undoubtedly, have to struggle with influenza for years, and now is the time to learn the lessons which later may save many valuable lives. All the help we can possibly give one another will, still, be too little.

VACCINATION AGAINST INFLUENZA

"Out of 4,212 that were vaccinated, not one man died". This is the report made by Ely, Lloyd, Hitchcock, and Nickson, of the Navy Yard at the Puget Sound Station in the state of Washington. As in other portions of the country, they have been through an influenza-epidemic. As the result of bacteriologic studies, these investigators came to the conclusion that hemolytic streptococci are mainly responsible for influenza and its complications. Accordingly, they prepared a vaccine, and with the results stated.

In the same number of *The Journal of the American Medical Association* in which this report appears, we find the fine report by E. C. Rosenow, of The Mayo Foundation. Using a vaccine consisting of the four types of pneumococci (including a green-producing diplostreptococcus), hemolytic streptococci, staphylococcus aureus, and the influenza-bacillus, Rosenow vaccinated some 28,459 people, of whom 20,792 received three inoculations. Among those receiving these inoculations, there occurred not a single death within a week after the third inoculation; within six weeks after the third inoculation, the percentage of deaths was 0.19; while among 61,753 uninoculated persons of whom records were kept, there were 3.4 percent of deaths.

In commenting upon this report, Doctor Rosenow says: "All but 2 of over 70 physicians that have used the vaccine report that the attacks of influenza, if contracted by the inoculated, are milder and of shorter duration, and that convalescence is more rapid than in the uninoculated."

These are straightforward facts. They may not have been properly "digested", and the conclusions arrived at by the authors may be wrong. Yet, in the light of the character of these men and their

standing as investigators in this special field, who can question the value of their conclusions, deny the value of vaccination, and advise against its use?

Nevertheless, there are those that do this. And, *The Journal of the American Medical Association* comments: "The data presented are simply too inadequate to permit of competent judgment".

THE INDEX

The Index, or table of contents, of contents of CLINICAL MEDICINE for 1918 is being printed at the time this is written and will be ready for distribution in a few days. Doctor, you should have your files of the journal bound, because a set of THE AMERICAN JOURNAL OF CLINICAL MEDICINE constitutes a reference library of great value. Send a postal card indicating your desire to receive a copy of the index and then send your last year's twelve numbers to the binder forthwith. The cost is small; the advantages are great.

If you prefer, you may send your journals to us and we will have them bound for you at the price of \$1.50 per volume, you to pay express charges both ways.

ADDRESS OF "THE MEDICAL REVIEW OF REVIEWS"

In an editorial notice published last month, we recommended *The Medical Review of Reviews* to the readers of our journal, but, inadvertently, we stated that the address of this publication was 12 Morris Park West. This was a mistake. *The Medical Review of Reviews* is published at 206 Broadway, New York, and everyone who is interested (and we trust many of our readers are) should write to this address for sample copies.

EMETINE IN HEMORRHAGE

Some two or three years ago, quite a number of articles appeared in this journal regarding the hypodermic injection of emetine-hydrochloride for the purpose of arresting hemorrhage. We are reminded of these articles by a letter just received from our old friend Dr. C. S. Cope, of Detroit, Michigan. Doctor Cope has the honor, we believe, of being the first one in America to try emetine for hemostatic purposes. He did this under peculiar cir-

cumstances. His own son had a sudden attack of hemoptysis. It was severe and exhausting. The usual remedies were tried and failed, and the Doctor felt that, unless relief came soon, the boy would die.

It was just then that the postman brought the monthly issue of CLINICAL MEDICINE. Hastily opening the journal, the first thing to meet his eye was an article recounting some French experiences with emetine-hydrochloride injections in hemoptysis. To Doctor Cope, this article seemed like an answer to his fervid prayers for aid. Having in his case a little of the drug in question, he began to administer it without delay, and, to his great joy, the hemorrhage stopped at once, almost as if by magic.

Since then, emetine has been used for arresting hemorrhage in a good many cases. Of course, it has not always succeeded (as no remedy will do), but, it has been effective in a surprisingly large number of instances. Just how this principle acts, no one seems to know exactly; nevertheless, that it does stop bleeding of the oozing type, there is abundance of proof.

This is now ancient history. It records things that occurred "before the war"; still, it also records clinical experiences of the utmost value and which should not be lost sight of. We still believe that every physician should carry with him, for use in emergencies, a few hypodermic tablets of emetine hydrochloride or a few ampules of its solution. We hope that the readers of CLINICAL MEDICINE that have had experience with this drug will be reminded by this little epistle to give us reports about their experience.

REBUFFED

A stranger knocked at a man's door and told of a fortune to be made.

"Um!" said the man. "It appears that considerable effort will be involved."

"Oh, yes," said the stranger, "you will pass many sleepless nights and toilsome days!"

"Um!" said the man. "And who are you?"

"I am called Opportunity."

"Um!" said the man. "You call yourself Opportunity, but you look like hard work to me."

And he slammed the door.—"Pittsburgh Post."

"WHILE WE SLEEP"

The rights and property of the Bayer Company, together with its subsidiaries, was recently sold at auction by the alien-property custodian, Mr. A. Mitchell Palmer. This German-owned chemical manu-

factoring company, the best-known product of which is aspirin, did a business, in 1917, amounting to \$5,608,502.51, with net profits of \$1,768,566.78. It was sold to the Sterling Products Company, of Wheeling, West Virginia, a "patent-medicine" concern, for \$5,310,000.

It is interesting and significant that aspirin (of the Bayer cross) and Cascarets now have a common owner. Can it be possible that the Sterling Products Company picked up the five plus million dollars, required for effecting this purchase, from the laxative tablet that "works while you sleep"?

Hot upon the trail of the preceding item of news comes the statement that the patent-office has cancelled the Bayer-owned trademark of the word "Aspirin."

As long as a man has the courage to stand up on his own two legs and fight, his battle is never lost. But, the minute he admits defeat to himself, his battle is lost, even if the odds are all on his side and the scrap has only begun.

—Charles Piez.

WAR-DEPARTMENT COMMISSION ON TRAINING-CAMP ACTIVITIES

From the beginning of the war to September of this year, venereal disease lost for the United States Army 2,300,000 working-days. This statement is made by Lieut.-Col. William F. Snow, head of the Social-Hygiene Division of the War-Department Commission on Training-Camp Activities.

The loss, figured in another way, amounted to the total incapacity of 6,300 soldiers for an entire year. Army statistics indicate that each case of gonorrhea means a loss, to the army, of a soldier's service for 9.53 days. The total loss from this disease was 1,486,680 days. For each case of syphilis, a loss of one soldier's time for 20.75 days is figured—a total loss of 550,250 days having thus been charged against this disease. Each case of chancreoid results in a loss of 11.69 days, and the total loss from this cause was 258,230 days. It is estimated that five-sixths of this burden was brought into the army by men already infected at the time they first arrived at camp.

Investigation by impartial and competent observers has shown the American soldiers and sailors to manifest a splendid morale, not only with respect to their military duties in actual fighting and in garrison

work, but, also in their leisure hours and in contact with the civil population. The accusation that has frequently been brought against soldiers and sailors—that they are very prone to be dissolute—is unfounded and could not be verified by the facts. Still, the figures quoted in the foregoing show that the venereal problem is a serious one and one that will be of special importance for the civil population now that our military forces demobilize and return to private life.

THE TRAINING OF HOME NURSES

During the recent epidemic of influenza, as also at the present time when a rerudescence of the epidemic is being experienced, the urgent need of women who are capable of caring for patients is greater than it was ever experienced within our memory. It is all but impossible to obtain nurses from training schools or from registry offices, while only here and there a "practical" nurse is at leisure only to be snatched up promptly by some physician or patient who has been watching for such an opportunity.

It can not be said that the dearth of nurses is attributable entirely to their activities in great numbers in military and naval hospitals as well as abroad; even though, undoubtedly, this circumstance adds to it. For some years, the demand for the assistance of these devoted women has far exceeded the supply.

There is another point, however: The services of a trained nurse entail upon the householder a serious drain upon his resources which already are barely sufficient, in the majority of cases, to cover the additional financial strain necessitated by illness in the family, by physicians' fees and druggists' expenses. There exists, particularly among people of the middle class, a great need of socalled practical nurses who are capable of following the physician's directions, of making the patients entrusted to their care comfortable, of watching symptoms, and so forth, and who, at the same time, are not above aiding a little in the household affairs, in fact, who may be able and willing to take vicariously the housewife's place if she is ill or to assist her if another member of the family is incapacitated.

In a great many instances, illness is not of such a nature as to require nursing that

calls for highly specialized training or knowledge. Any woman with a sufficient endowment of common sense can readily acquire the necessary information and experience in the space of a few months. This, of course, does not mean that the trained nurse is superfluous. On the contrary, her specialized abilities are in demand sufficiently often to make it desirable that far more young women enter the profession. But, at the same time, under less complicated conditions, and when the family exchequer is limited, practical nurses will do very well and often assist the physician satisfactorily and successfully.

With his characteristic energy and habit of going directly to the bottom of things, the Chicago commissioner of health, Doctor Robertson, has suggested that women who have a knack for taking care of the sick, but who for some reason or other can not take a regular course of training, should be given facilities for an abbreviated course, so to speak, say, of six or twelve months, to be fitted for practical nursing. However much such a plan may be disconcerted by the trained nurses themselves, it strikes us as being well conceived, indeed, and as meriting the support of physicians all over the country.

Every physician knows women whom he likes to have around with his sick because they have the gift of obeying orders, of making the patients comfortable, of saving the family from disintegration and, if only periodical, disaster. These women might become much more useful by taking a short course of training. They have it in them to become a blessing and a god-send to many patients who without such practical help would have to forego the assistance of any nurse whatever. We are distinctly in favor of Doctor Robertson's plan, and hope that something will come of his suggestion.

There is such a thing as being too contented. We read a lot about the slough of despond, but, we don't hear much about the slough of contentment. And yet, there is such a thing, and, so far as progress goes, a man is about as badly off in one as in the other. He won't do much traveling in either case.

—Ralph C. Peters.

seem as though the mother of today should have more time to spare than her own mother before her had. I do not do half the sewing mother used to do. She made frilly aprons for me when I went to school, elaborate affairs with tatting and rick-rack and lace, and she made everything else that I wore, too, except my shoes and stockings. I buy all of Margaret's dresses ready-made; she has never had an apron; and she wears "knickerbockers" to play in. Mother used to spend twenty minutes every morning curling my hair around her fingers. Margaret's hair is straight and docked short, and she brushes it herself. Mother used to do endless baking and cooking. Her Sunday dinner was positively orgiastic: it used to take us all Sunday morning to get it and all Sunday afternoon to get over it. My meals are less hectic and a good deal more wholesome.

"All of which should give me more time to myself than mother used to have. But, mother wasn't expected to read two newspapers a day and remember what was in them. She didn't have to carry the map of "Verdun sector" in her head and know the names of all the generals in twenty different armies. She wasn't expected to knit helmets and take a first-aid course and sell Liberty Bonds. Nobody demanded that she be able to pronounce Tschaikowsky and Villa and Turgenev, expound the political maxims of Treitschke, and remember that De Bussy was not a face-powder. I have to know all of these things and take care of a house and a husband and teach a deaf baby besides.

"The only way I can do it is, by a process of systematic elimination; which, I hasten to add, is no hardship, really; for, all my life I have loved to get rid of things. I do not let things accumulate around the house—dirt, work, old clothes, old newspapers, magazines. There isn't a magazine more than three months old in the house, and though Robert sometimes laments the disappearance of September *Harper's* or of the January 2d *Literary Digest*, I find the clear spaces on the shelves and library-table exceedingly restful. I do not keep old clothes around, waiting for a free mending. I never have a free day to devote to nothing but mending; so, when a garment is so old that it can not be used without considerable fix-

ing over, I give it away. That isn't extravagance, it's self-defense. I will not be pestered by the perpetual reminder of things I haven't done. They drag me down just when I need suppleness and mental agility to keep up with Jack's demands."

All of which could be copiously commented upon if we had the space at disposal. But, anyway, just by way of at least one or two direct applications:

How about that medicine-cabinet or those medicine-shelves, doctor? And, are not there a good many "old clothes" littering up valuable space and gathering dust when it would be better to discard them? The same possibly may be true of your book-shelves, at least of the "grab"-shelf in which odds and ends of books and pamphlets accumulate unclassified and never read. Let us make a clean sweep of our drug-shelves; and no less of our brain-boxes. Would not it be nice if we could rid ourselves of useless, cumbersome ideas and retain only those that enable us to be of better and greater service, to progress constantly and to grow mentally and spiritually with the succeeding months and years?

You have to marry women to know 'em, and then, of course, it's too late.

—F. Graham Cootes.

THE STIMULATING EFFECT OF PRAISE

In "The Diary of a Deaf-Child's Mother," by Harriet U. Andrews, which is being published serially in *The Volta Review*, (already referred to), the mother in the story relates how, at first, she shrank from having it known to her friends and neighbors that her little boy was deaf, and how she was engulfed in self-pity and used to be afraid that her friends would pity her. However, in course of time, she succeeded in facing her problem courageously. She "acquired a sturdy complacency in the matter", and now finds that, instead of expressing pity for him (of course, they are sorry, but, they do not rub it in), they are interested in her efforts of teaching her son and are ready to admire his small achievements. When they see for themselves how the little fellow understands his mother and responds by his actions to her directions—instead of saying, "What a

pity", they all exclaim, "Isn't it wonderful!" which, she adds, is very stimulating in its psychological effect.

There is, here, the text for an educational sermonette that might be preached to advantage to all of us. It happens all too often that the small efforts and tiny accomplishments of children and also of young people are watched by their wise seniors with indulgent amusement, that they are called "very pretty," "very nice", and all that, accompanied by a shrug of the shoulder or a turning away to more interesting things. The result is, that the applauded (?) youngsters return, perhaps with a sigh, to their occupations or put away the results of their efforts, with actually all the joy of creating frozen out of their little souls.

Undoubtedly, cordial applaud and approval have a tremendously stimulating effect upon one's efforts. If only the applause be tempered with good sense, it will serve to encourage the young aspirant to renewed and intense efforts. However, to the Scylla of nonapproval or lukewarm praise, there is opposed the Charybdis of foolish and excessive laudation. We have known ambitious young people, who had the making of good and industrious citizens in them, spoiled entirely and made into sad coxcombs by the silly asseveration of admiring friends, including even teachers, that their efforts were "just splendid," "wonderful", and all the rest of it; all of which was promptly accepted as being absolutely so, as nearly perfect as anything could be, and not, as it was meant to mean, that, for a youngster of that age, the work was truly well done and excellent. All praise should be tempered with the conditions naturally attached to it. Yet, it should be unaffected and unforced, showing a cordial interest and a sympathetic entering into the problems and ambitions that prompted them. In this manner, young people will be encouraged to constantly increasing and improving efforts; otherwise, many a budding genius may be choked in the bud and much useful work will be lost.

THOSE LIBERTY-BOND PAYMENTS

Wherever the English language is spoken, people know the meaning of "sportsman". "A fair field and may the

best man win" is the supreme law of all our games and sports. And that law, observed as a matter of honor, on every baseball-, football-, cricket-, and lacrosse-field, accounts in no small measure for the magnificent victories of the Allies on the western front. Our national sports have made us despise "quitting" and the "yellow streak".

The same code of honor holds with reference to Liberty-Loan subscriptions. And it has a vital element in addition—that of loyalty to Country and loyalty to the Army and Navy.

Every man, woman and child in America who subscribed for Fourth Liberty bonds on a deferred-payment plan is in honor bound to live up to the terms of the subscription-pledge. Nothing but "dire necessity", in the words of Secretary McAdoo, can possibly excuse "quitting" and failure to carry through the plan. Make all the payments, receive the Liberty Bonds, and hold them fast until the Government repays the principal.

This is a rule on the ball-field. Fight for a fair hit. Run hard for the bases and the home-plate. Work with the team. Fight down any selfishness. Combat any disposition to quit or to accept defeat. Be honorable and play the game like a man.

This is the program that Liberty-Bond subscribers are in honor bound to carry through. No matter how much self-denial it may call for—no matter how hard the "scrimping" and economizing may seem—every subscriber is bound by the laws of patriotism and by the "honor rule" of good "sportsmanship" to accept the sacrifices and make good the subscription-pledge.

Any other course throws a burden upon the government, interferes with the best interest of the Army and Navy, and is a stain upon one's personal self-respect.

Be a good "sportsman". Be a patriot. Have "Nerve". Pay for every Liberty bond that you signed for.

DEATH OF DR. A. A. NEFE

We have been informed of the demise of Dr. A. A. Nefe, late of Lookout Mountain, Tennessee, where he had practiced his profession for twenty-three years.

Dr. Nefe was born in Columbus, Ohio, in 1853. He was graduated at the College of Physicians and Surgeons at Cincinnati, and practiced medicine in his home state

for twelve years. After that, he moved south and completed his life and his life's work in Lookout Mountain. Doctor Nefe was an old subscriber of CLINICAL MEDICINE and an enthusiastic advocate of positive therapeutics. Like so many other physicians, he, during the recent epidemic of influenza, gave himself untiringly to the enormous work demanded of him, spending his strength to such an extent that eventually he, himself, fell, a ready victim to the same disease.

The more I study the lives of great men, the more it seems to me that modesty is an almost invariable accompaniment of real greatness. —Bruce Barton.

HONOR FOR DR. BEVERLEY ROBINSON

The readers of CLINICAL MEDICINE who have become acquainted with Dr. Beverley Robinson, of New York, through his frequent communications to this journal, will feel like joining us in heartiest congratulations upon his election as corresponding member, *honoris causa*, of the Société Médicale des Hôpitaux de Paris.

Other prominent American physicians that were at the same time elected to membership in this society of physicians of the hospitals of Paris are: Dr. Alexander Lambert, president-elect of the American Medical Association and director of the medical service of the American Red Cross in France; Col. James T. Case, editor of *The American Journal of Radiology* and chief of the radiologic service of the American Army in France; Prof. William S. Thayer, of Johns Hopkins, consultant to the American Expeditionary Force; Prof. Morton Price, of Tufts College, New York; and Dr. Simon Flexner, director of the Rockefeller Institute for Medical Research.

LET'S TALK IT OVER

For a long time we have not felt quite right about the designation of our "Miscellaneous Articles" department. When we speak of miscellaneous things, there is suggested the idea of something that can not be just placed definitely, something that might be thrown in a grab-bag, in a bureau for odds and ends, or a shelf that contains the rag-tail and bob-tail of our possessions. Yet, the department in which the "Miscellaneous Articles" appear in CLINICAL

MEDICINE, in our opinion, is a very important one. It is the "round table" of the readers. It is a common meeting ground on which the readers of CLINICAL MEDICINE have an opportunity to air their views, discuss questions of common interest, record objections and differences in opinion that they may wish to voice; in short, it is this department, we believe, that adds materially to the actual interest and to the popularity among physicians of CLINICAL MEDICINE.

Considerations like these have caused us repeatedly to cast about for another name. Essential changes always are to be avoided unless they actually constitute an improvement. Nevertheless, we believe that in this instance a change is justified, and it occurs to us that no name that we could find expresses so well the purpose and character of this department of the journal as the one that we have finally selected and that stands at the head of this article. We sincerely hope that it will meet with the approval of our readers.

Now, everybody, please keep in mind the purpose of the "Let's Talk It Over" department. It isn't so much for us, the editors, to fill it, as for you, the readers, to supply us with the material. It is your particular department of the journal. We depend upon you for "copy", reserving for ourselves only the privilege of editorial comment where it seems called for.

It is all a building process, the rack is built of atoms, the tree is built of cells, the house is built of bricks, success is built of conquered details.

—Straus, Investors Magazine.

THERAPEUTIC OPTIMISM

Some months ago, the writer was consulted by a lady coming from a country town in one of the central states. This patient had passed through an attack of pleurisy and a later one of pneumonia, the latter being complicated with empyema and which necessitated the resection of a portion of one rib. Recovery was exceedingly slow; indeed, quite unsatisfactory, since there remained a discharging sinus and the patient's general health showed no signs of improvement. The attending physician gave her to understand that she could not expect anything better and, though still a young woman, of about 36 years, she seemed doomed to a life of invalidism.

Careful and repeated examination and continued observation provided certain indications for curative treatment which was aided materially by treatment of the sinus with Beck's bismuth paste. After the course of several months, this patient returned home in very much better health than she had enjoyed for years and later reports indicate that her improvement is lasting.

An old lady was afflicted with pain and weakness in the right shoulder and knee, leading to almost entire loss of power in both extremities on the right side. Her physician treated her with various tonic remedies, but, to little avail; while massage and other manipulative treatment, administered by an interested nurse, afforded very slight improvement. A careful examination of this patient showed her metabolism to be badly disturbed; she had lost courage and seemed fast drifting into entire helplessness. A new physician, who had been called, took pains to instil into this patient a confidence of coming improvement. The metabolic disturbances were corrected by suitable remedies; the tired nerves were stimulated and supported by hypodermic injections of nuclein solution, other indications being met by appropriate remedies. The result is that, for several months, this old lady has now once more been able to attend to her little household duties and to take walks that, for her, must be called quite long. Her outlook on life has changed entirely and she is again happy.

A lady in middle life had, through serious reverses for a number of years and on account of worry over her husband's protracted illness, lost her mental poise and, in fact, had become mentally deranged, although not seriously so, and had become alarmingly ill. Recovery of her physical health was exceedingly slow; mentally, there remained a pronounced fear of impending disaster as also of possible insanity. Her physician appeared to be unable to allay her fears or to complete the "job" of guiding her back to a satisfactory state of physical health. Another physician was consulted who ascertained the physical indications for treatment and acted upon them, with the result that soon a decided improvement in her general health became noticeable. More, however: this

physician made a painstaking study of the patient's mentality; discussing with her in detail her fears of what might be going to happen and showing her the groundlessness of these anticipations. Gradually, largely owing to the unvarying and confident assertion of the physician that a complete cure was possible, this patient rid herself of her morbid apprehensions, regaining her normal optimistic view of life. In consequence, her physical conditions improved markedly so that she is again able to manage the affairs of her household. She has bravely passed through various periods of stress and anxiety, since, thus showing that her recovery is an accomplished fact.

What is the moral? Is any physician justified in declaring to any patient that he, or she, can not be improved further, that the outlook for an ultimate recovery is hopeless? Is it ever right, and fair, to deprive any patient of every hope as to the future? Many physicians, on meeting certain cases of illness, such as, for instance, lobar pneumonia, throw up their hands and give up. They as much as suggest the immediate engaging of the undertaker. Something like it happened, and still is happening, with respect to the epidemic of influenza and influenza-pneumonia. A diagnosis of these maladies is, with many, as good as a death sentence.

What cowardly neglect of duty! A physician who is not willing to fight death, step by step, to the last ditch, is not worthy of his calling and would do better to give it up for something else. If our boys had given an unfavorable prognosis, during those serious and gloomy days in the Argonne, the war might not have been won by the democratic powers but by the dark forces of autocracy and frightfulness.

But, those boys kept on fighting!

It is one of the first duties of a physician to be an optimist and to impress his patients with the fact that there is always hope; also with the fact that he is doing the very best that can be done. A patient who has the confident assurance that his physician is working hard in his behalf—not, though, by "expectant" treatment—will cooperate courageously and thus comply with one very important condition of recovery. The physician who knows that his drugs are capable of doing certain things, and who applies this knowledge,

imbues the patient with the definite expectation of coming improvement.

A pessimist has no place in the sick-room.

Let's be optimists.

If you say, "Such and such a thing can't be done," and a man comes back at you with "I have done it!"—well, it's your next move, isn't it?

—American Magazine.

"A REGISTRATION FEE FOR PHYSICIANS"

Two months ago, Mr. Francis W. Shepardson, director of the Department of Registration and Education of the State of Illinois, discussed (*The Jour. A. M. A.*, Nov. 16, 1918, p. 1629) the first year's experience of this department in its attempt to enforce the Medical Practice Act. A preliminary survey of conditions disclosed certain discouraging elements in the Illinois medical situation. Especially was it found that "there are more fakers and charlatans in medicine than in all other professions and trades put together. There are more irregular, improper, indecent and immoral things connected with medicine than with all the rest." Mr. Shepardson deplores the absence of efficient and effective organization of the members of the medical profession, and generally treats physicians to a philippic that we might do well to read, mark and inwardly digest. For, do not mistake! while there are some statements in his sermon that are not quite fair and others that refer to conditions for which physicians may not justly be blamed, Mr. Shepardson is quite right in asserting that there is need of reform. This must readily be granted.

The Illinois Consolidation Bill, which became a law early in 1917, has for its purpose the regulation of medical practice in such a manner that it shall become possible, in course of time, to eliminate dishonest and incompetent medical practitioners. The success of any law depends not only, as *The Journal* suggests (*J. A. M. A.*, Nov. 30, 1918, p. 1827), on the ability and integrity of those appointed to enforce it, but, also on the willingness of the state's attorneys to enforce the law, when transgressions against it are brought to their attention, and, likewise, on the attitude on the part of the public, as to whether or not it is in favor of a certain law. While the Department of Registration and

Education succeeded in bringing about important changes for the better in medical schools and in prosecuting medical crooks and illegal practitioners, its activities in the latter direction were handicapped greatly "because regularly licensed physicians refused to aid, because state's attorneys declined to enforce the laws, and because county medical societies have been too weak or too fearful to demand that such prosecuting officers perform their sworn duty, or too little interested to help in creating public sentiment in support of law and decency."

It is the purpose of the department to improve conditions medical, for one thing, by making certain that the license to practice medicine in Illinois really shall mean something. The members of the examining committee have determined, for instance, to make the entrance into the profession more difficult by closer scrutiny of the written and oral reports of the candidates. "They share with other representatives of the department in the earnest desire to make the Illinois license in medicine most honored of all state licenses because most carefully guarded."

However, with conditions in the recognized medical schools more satisfactory than ever, and with the examinations for licensure greatly improved, the next important task of the department is, the regulation of practitioners within the state. Mr. Shepardson suggests, as a means to this end, the annual registration of all licensed practicing physicians in the state, with the payment of a small annual fee that would provide funds for the activities of the department.

It is claimed that such registration would enable the department to keep in touch with legal practitioners; it would be a great aid in keeping a correct roster of addresses; it would assure a correct list of those who are entitled to the privileges of the Medical Practice Act; it would enable the department to discover cases of individuals using the license of others who have died or have left the state, or from whom certificates may have been stolen or purchased; it would enable the department better to control some of the unethical

practitioners whose actions bring discredit on the medical profession.

As was to be foreseen, Mr. Shepardson's suggestion called forth much comment, both favorable and the reverse; the latter being not always quite dignified or to the point. Many physicians resent the suggestion of annual registration, even intimating that the fees collected would come in handy for somebody in need of a soft job. Such insinuations do not solve the problem nor do they further its solution.

There can be no doubt about it that medical conditions, in Illinois as well as in other states, leave much to be desired and that every honest attempt to improve matters should receive proper attention. It has been suggested that the constantly increasing difficulties attending the gaining of a medical education and of a license to practice encourage and promote the unrighteous cause of irregular practitioners. It is certain that the unsatisfactory financial returns of medical practice, especially in small towns and in country districts, do not tend to attract the best and brainiest or the most capable among young men and women. These are only a few of the points that might be raised in the discussion of the question.

The tendency of the last years, fostered greatly by war conditions, has been in the direction of state medicine. It has been questioned whether medical men returning from military service will be satisfied to go back to old conditions more or less haphazard. It has been claimed that physicians properly should be employes of the state, duly licensed and inducted into their work and, likewise, paid by the state. Many other suggestions have been offered from time to time, all looking to an improvement over old-established conditions and all claiming to bring about a greater degree of efficiency in carrying out the duties of the medical profession which is, not only, to cure disease but, still more, to prevent disease. Mr. Shepardson's important article covers one phase of the complicated problem. The whole of it hardly is understood or realized. Yet, the next years will undoubtedly bring forth many changes. Will they be for the better?

Leading Articles

The Treatment of Infected Wounds with Dichloramine-T

With Special Reference to Its Advantages Over the Carrel-Dakin Methods*

By HERBERT W. BAKER, B. A., M. D., Toronto, Canada

THE subject of the treatment of infected wounds is one that has probably excited more interest than any other among the medical profession since the war began. Many methods of treatment have been devised, tried out, and cast aside. Probably no part of our prewar teaching has changed as much as this question of antiseptics. We formerly used bichloride of mercury, carbolic acid, lysol, boric acid, et cetera, believing more or less that they killed micro-organisms under all conditions; but, now we know that they are antiseptics, that is, they inhibit the reproduction of bacteria; however, they are not germicides unless used in strong solutions under favorable circumstances. The perfect germicide is one that will destroy bacteria without injuring the body-cells. None of the prewar antiseptics came up to this standard. Dr. H. D. Dakin, probably more than any other, has done much laboratory-work in antiseptics, and, in general terms, he gives us the following results.¹

Dakin's Valuable Experiments

Using a growth of *staphylococcus aureus* in a blood-serum and muscle-extract medium, he found that:

(1) Mercuric chloride, 1-10 percent, did not disinfect in three hours, but, did in twenty-four; (2) silver nitrate, 1 percent, did not disinfect in twenty-four hours; (3) argyrol, 15 percent, did not disinfect in six hours, but, did in twenty-four; (4)

zinc chloride, 3 percent, did not disinfect in twenty-four hours; (5) phenol, 2 percent, did not disinfect in twenty-four hours.

Of dye antiseptics: (1) malachite green, 0.3 percent, did not kill in forty-eight hours; (2) acriflavine, 0.3 percent, did not kill in six hours, but, did in twenty-four; (3) proflavine, 0.3 percent, did not kill in twenty-four hours.

So, we see that our old favorites are gradually losing their stand.

In the laboratory established at Compiègne, by the Rockefeller Foundation, in the fall of 1914, Dr. Henry D. Dakin, of New York, examined about 200 substances known or thought to be antiseptics and finally came to the conclusion that chlorine compounds were the best germicides. Labarraque's solution, known and used for many years, was a very efficient antiseptic, but, owing to its high alkalinity causing irritation, it could not be used on the tissues continuously. Dakin reduced this alkalinity with boric acid, and, as a result, obtained a solution that did not irritate the open tissues. This solution soon became known as "Dakin's Solution". It is an aqueous mixture of sodium hypochlorite between 0.45 percent and 0.50 percent in strength.

Carrel's Technic and the Objections to It

Dr. Alexis Carrel, who was associated with Dakin in his work in France, devised a means of using this solution to the best advantage. The wound was opened widely in such a manner that it formed a well, and small perforated tubes were placed in such positions that the Dakin's solution injected

*Read before the surgical section of the Academy of Medicine, Toronto, April 16, 1918. Reprinted from *Canadian Medical Association Journal*.

¹ Dakin and Dunham, "A Textbook on Antiseptics".

through them would reach every crevice of the wound. These tubes were linked together and, from a reservoir suspended above the bed, the solution was run into the wound every two hours, day and night. The results, when all the technic of the treatment is properly carried out, are striking, badly infected wounds being sterilized in a few days. Carrel, Depage, and others have reported many cases where wounds of all kinds have been sterilized and secondary suture done with success, but, as Carrel himself says, "the indifferent success that many have had is because of their failure to grasp and apply the details of the technic."

In order to carry out this treatment, the assistants must be specially trained. The house-surgeon doing the dressings must know the details perfectly; the nurses that assist him and who inject the Dakin's solution (every two hours) must, also, be specially trained. All those that have had success with this treatment agree upon these points. In a general hospital where the nurses are changed frequently, such a procedure is impossible. Here, then, is the first place the technic may fall down.

At the Rockefeller Institute, where Carrel is at present training American army-surgeons, I spent ten days in their laboratories and wards. The house-surgeon, a trained man, had four or five nurses and an orderly to assist him with the dressings. He took about two hours to do fifteen dressings. Considerably more than half of that time was spent in preparing the surrounding skin with vaseline or vaselined gauze, in order to prevent irritation. In spite of this preparation, I saw several cases where the skin had been more or less "burned" by the solution. Without this care, serious results may follow. Probably the most important part of the Carrel technic deals with the protection of the skin from the irritation of the solution.

It is essential at the primary operation to prepare the wound so that it will act as a well to hold the antiseptic solution. Thus, the first principle of surgery of infections, dependent drainage, is abandoned. If at any time during the repair of the wound the technic should break down, such as breakage of apparatus or failure in the supply of solution, these wounds act as pus-pockets, and the results to the patient may be disastrous. Again, when the wound has been sterilized, if it is impracticable to

suture it, there is a basin left that fills with pus, and, as is well known, many such wounds will not heal as rapidly because there is not dependent or continuous drainage.

Dakin's solution is very unstable. In order that it may be strongly enough antiseptic, it must have over 0.45 percent of active chlorine present, and that it may not irritate the tissues it must be less than 0.5 percent. The solution, therefore, must be made accurately and, at the most, every second day. Moreover, the alkalinity must be reduced almost to neutrality. Owing to instability, this alkalinity tends to increase, and, therefore, the solution must be tested daily by titration and with phenolphthalein. Only those that have done this work and kept a ward supplied with Dakin's solution can realize the time and care all this takes.

Another problem that is becoming more important every day is, the amount of dressing material used. With the price of gauze and cotton soaring, we must do all in our power to save. The Carrel technic consumes more cotton pads than does any other kind of dressing, because of the quantity of solution that is injected into the wound twelve times a day. Unless the technic is absolutely perfect, there are going to be certain cases where there will be an overflow resulting in the wetting of the bed, with discomfort to the patient and more work for the nurse.

The apparatus used in the Carrel-Dakin treatment is complicated and expensive. Rubber tubing is difficult to get and high in price, and a great quantity is needed.

We are told that the main reason why there are fewer infected wounds in the army-hospitals now than there were at the beginning of the war is, that the primary operation is being performed on an average one and a half hours after the receipt of the injury, instead of after many hours or maybe days. In a hospital using the Carrel-Dakin treatment, much time is used in putting the tubes in place and fastening them there. Following a "push", many hours will be used in an operating-room doing this work that will keep some less fortunate patient from getting prompt attention.

Dichloramine-T, and How Manufactured

Because of some of these objections, we decided to try out another chlorine antiseptic, one that was reported, in *The Journal of the American Medical Association* for July 7, 1917, by Dakin, Lee, Sweet,

Hendrix, and LeConte; namely: toluene-parasulphon-dichloramine, or, as Dakin named it, dichloramine-T. This substance has the chemical formula $\text{CH}_3\text{C}_6\text{H}_4\text{SO}_2\text{NCl}_2$, and it was made first by Kastle, Keiser, and Bradey² in 1896, and later by Chattaway³, in 1905, and has been more recently brought out and used by Dakin.

It is an aromatic chloramine in powder form, containing a little over 29 percent of chlorine. It is made in the following manner: Chlorinated lime (from 350 to 400 Gm.) of good quality (of 25 percent or more of available chlorine) is shaken with two liters of water in a shaker for half an hour and then allowed to settle. The supernatant fluid is siphoned off and the remainder filtered. Powdered toluene-parasulphonamid, 75 Gm., is then added to the whole of the hypochlorite solution and shaken until dissolved. The mixture is filtered, if necessary, placed in a large separating-funnel, and acidified by the gradual addition of acetic acid (100 mils). Chloroform (about 100 mils) is then added, to extract the dichloramine, and the whole is well shaken. The chloroform layer is tapped off, dried over calcium chloride, filtered, and allowed to evaporate in the air. The residue is powdered and dried in the vacuum.

Another method, more rapid for greater quantities is as follows: 50 Grams of para-toluene-sulphonamid is dissolved in 500 mils of water, and 100 Grams of sodium acetate and 100 mils of chloroform are added. The container is immersed in cold water and a rapid stream of chlorine is passed in until the mixture is saturated. The mixture is allowed to stand a few hours, when, if the odor of chlorine disappears, more of the gas is passed in. If necessary, more chloroform may be added, to dissolve the dichloramine. From this point, the procedure is the same as in the preceding method.

Its use as a disinfectant is dependent upon the reaction of the NCl_2 group in the side chain. In this group, the chlorine is very loosely held and is given off whenever the substance comes in contact with any other material having an affinity for chlorine.

This takes place in the presence of proteins. All proteins contain large numbers

of amino-acid groups represented by the formula. $\text{R}-\overset{\text{H}}{\underset{|}{\text{C}}}-\text{CO}$. The H atom attached to the N atom is replaced by the Cl atom: $\text{R}-\overset{\text{H}}{\underset{|}{\text{C}}}-\text{CO}$. This compound then contains NCl

the NCl group and belongs to the class of chloramines. Their chlorine is still active and they are themselves active germicides. Other reactions also occur, which use up part of the chlorine, converting it into an inert form, as, for example, the chlorine becomes united to carbon or forms chlorides. This is the chemical reaction that takes place between the dichloramine-T and the proteins of the bacteria, and this chlorination of bacterial proteins seems to be incompatible with the life of the micro-organism.

We know from our study of chemistry that the union of chlorine with other substances is greatly hastened by the presence of water—even the small amount of moisture in the air—by the action of light, especially direct sunlight, and by heat.

Keeping in mind these characteristics of chlorine and chlorine compounds, we now will consider the characteristics of dichloramine-T.

The Characteristics of Dichloramine-T and Its Oil-Solution

It is only slightly soluble in water, but freely soluble in certain oils and in benzol, chloroform, carbon tetrachloride, alcohol, and acetone. In order that the dichloramine-T may be used efficiently, it must be in solution. Of the different solvents, chloroform and carbon tetrachloride are the only two that contain their limit of chlorine and, therefore, give us permanent solutions; but, as these can not be used continuously on the tissues, they can not be used as carriers for the dichloramine-T. Eucalyptol is one of the oils that will dissolve it; however, this oil, having an affinity for chlorine, extracts the chlorine from the dichloramine-T, thus causing decomposition. If, however, chlorine is added to the eucalyptol before dissolving the dichloramine-T in it, we get a fairly stable solution. Originally⁴, the eucalyptol was

² Amer. Chem. Jour., 18, p. 491, 1896.

³ Jour. Chem. Soc., London, 87 (1); p. 145, 1905.

⁴ Jour. Amer. Med. Ass'n, July 7, 1917; vol. lxxix, pp. 27-30.

treated with potassium chlorate and concentrated HCl, the result being an oil containing about 1 percent of chlorine.

This oil would dissolve about 15 percent of dichloramine-T, but, because it caused irritation when used on wounds, it was found necessary to dilute it up to 50 percent with paraffin-oil, also chlorinated. These are the preparations that have been on the market for some months.

However, we had considerable difficulty in getting stable solutions with these mixtures. The addition of the paraffin-oil caused a precipitate to form in two to four days.

In October last, while in Philadelphia, Dr. Paul Lewis, of the Henry Phipps' Institute, told me of another method that they were using to chlorinate the eucalyptol, and we soon had some made in the laboratory here. Since then, Krauss and Crédé⁵ have published this method of making it. Chlorine gas from a cylinder was passed through eucalyptol for about thirty hours in good daylight, the temperature being kept below 80° C. by regulating the flow of gas. This raises the specific gravity from 0.925 to 1.2. It was then neutralized with dry sodium carbonate and dried with calcium chloride, when it was ready for use.

This oil, we found, would dissolve 20 percent dichloramine-T and could be used without diluting with chlorinated paraffin-oil. The great advantage of this solvent was, that a solution of dichloramine-T in it was stable for at least six weeks if kept under proper conditions. Also, a great mass of antiseptic, say, 20 percent dichloramine-T, could be used for a primary application in the operating-room.

This is the solvent that we have used in most of our cases up to February 15. As it did not come on the market, we made it in the laboratory, and after some trouble succeeded in turning out a good product.

Chlorinated Paraffin (Chlorcosane), the Improved Solvent

In January, 1918, Dakin and Dunham⁶ suggested the use of chlorinated paraffin-wax, to which they gave the name of chlorcosane, as a solvent for dichloramine-T. This is made from ordinary paraffin-wax chlorinated by passing a rapid stream of chlorine through it until it has increased about 50 percent in weight. The temper-

ature must be kept between 125° and 140° C. The hydrochloric acid formed is then neutralized with dry sodium carbonate and the oil filtered while hot.

We promptly set up the apparatus and made the solvent, and the results are even better than we anticipated. We obtained a solvent that was much cheaper, materials costing about 40 cents instead of 4 dollars, and the time to make it was reduced by several hundred percent.

This solution causes no irritation whatever on the most painful wounds. Another great advantage is, that the odor is very much reduced and much less disagreeable. It is a clear oil, slightly heavier than water, and of high viscosity. It will dissolve, at room-temperature, 8.5 to 10 percent of dichloramine-T. To make the solution, it is advisable to heat one-fourth of the oil to 80° C., dissolve the dichloramine-T in it, and then add the other three-fourths of the oil, as dichloramine-T dissolves much more rapidly in the heated wax.

We use this solvent with 5-percent dichloramine-T now in all cases, except skin-grafts and large superficial wounds, such as burns, where we use 1 percent.

Precautions Anent Dichloramine-T-Chlorosane Solution

There are several precautions one must take in using dichloramine-T, which all depend upon the fact that the solution, if not kept properly, may be easily decomposed.

1. The solution must be kept in dry brown bottles (blue bottles will not do), and not exposed to sunlight.

2. If water, alcohol or other adulterant, even a few drops in amount, is introduced into the bottle, it will cause decomposition in the course of twenty-four hours.

3. Decomposition is indicated by the presence of crystals in the solution or by the appearance of cloudiness. This means that the dichloramine-T has been broken up and toluene-sulphonamide formed. This is not an antiseptic and is an irritant. Therefore, decomposed solutions should be at once discarded. In chlorcosane solutions, if they are kept cold, the wax may crystallize slightly. Gentle heating will cause this to melt again. Toluene-sulphonamide, the decomposition-product, will not dissolve except in hot solution.

4. Bottles or other containers of solutions of dichloramine-T should be cleaned with chloroform, as this will dissolve the dichloramine-T and the wax. They should

5. *Jour. Amer. Chem. Soc.*, Dec., 1917.

6. *Brit. Med. Jour.*, Jan 12, 1918.

then be thoroughly dried before using. Containers in which the dichloramine-T has decomposed should be washed with hot water and dried before using again.

5. Wet dressings should not be put over a wound on which dichloramine-T has been used, because the water will cause decomposition of the dichloramine-T in the wound.

6. If used in an atomizer, this should be all glass, as the chlorine will corrode metal and hard rubber.

The results we obtained with dichloramine-T were, certainly, as good as those we had with Dakin's hypochlorite solution. We have a solution now that, unmixed, is permanently stable, or mixed, is stable for from two to three months, and takes only a fraction of the time to make up.

Very little training is necessary to know how to use it, and that only on the part of the surgeon or house-surgeon doing the operations and dressings. The nurses do not need to be specially trained.

The amount of dressing-material used is very much less. In Ward A (Toronto General Hospital) we use about three-fourths as much as do the other services. On account of the uneven number of dressings done, we can not give exact comparative figures; however, Sweet gives figures for a hospital in France. With an equal number of dressings done, the ward using eusol needed three times as much gauze and about 20 percent more cotton than did the ward using dichloramine-T.

The apparatus necessary for the use of dichloramine-T is an all-glass atomizer and occasionally a glass pipette or a small rubber catheter, which costs considerably less than the Carrel apparatus.

The time necessary for the primary operation is considerably lessened, as there are no tubes to put in place and retain there. The time used in doing the dressings is also less, Sweet reporting that he does 30 major dressings in ninety minutes.

Considering the question of the transportation of wounded, it is well known that the Carrel-Dakin treatment can not be carried out when a patient is being transported, while with dichloramine-T it is simple.

Method in Detail of Using Dichloramine-T

We wish now to present in detail the method of using dichloramine-T in different conditions, with certain case-reports.

We have purposely put the treatment of newly made wounds as the first in order, to make it more impressive, because we

feel that in this class of wounds dichloramine-T is of the most service.

We are more and more impressed with the importance of the interval of time elapsing between the receipt of the injury and the time of primary treatment, as being the most important factor in the prevention of infection.

In the battle of the Champagne, 80 percent of the cases contained the gas-organism in the wound when cultured and 60 percent had the clinical symptoms, but, in the battle of the Somme, but 20 percent had gas on culture and only 5 percent showed clinical symptoms. In 1915, our mortality was 4.6 percent, but, in 1916, it was only 1.9 percent. Why this improvement? Many voluminous reports have appeared of greatly improved results in the treatment of wounds with many germicidal agents. However, the fact that this improvement was not confined to wounds treated with any one particular germicide suggests that other factors might at least be equally important. The organization of the armies had so improved during this year and a half that the wounded were being treated in one and one-half hours, instead of in from five to seven days. Furthermore, the surgeons were equipped more completely, so that the primary operations were thorough. Removal of 20 percent of the foreign bodies and the routine free incision, with wide excision of dead and devitalized tissue, had been practiced. There is no doubt that these two points have brought down the death-rate. Moynihan and Crile claim that all that is necessary is, excision of the devitalized tissue. Carrel's technic calls for the same operation.

Our technic has been to use gasoline to clean the surrounding skin, to remove as much devitalized tissue as possible, then to swab all the wound-surfaces with dichloramine-T, leaving them wet with it and, if the wound has been received within six hours, to stitch it up without drainage.

Dichloramine-T does not affect the tensile strength of catgut nor the holding of the knots, so that the danger of secondary hemorrhage from the slipping or premature absorption of ligatures can be disregarded.

At the Midvale Steel Works, near Philadelphia, where there are about 12,000 employees and where there is a well-organized hospital that keeps accurate records, the following comparative results are given:

In 1916, they used iodine, and, in 1917, dichloramine-T. Using iodine, they had 9.8

percent of their wounds showing infection. With dichloramine-T, they had 1.5 percent of their wounds showing infection. Primary suture of wounds, using iodine as antiseptic, gave pus development in 11.6 percent, while using dichloramine-T, there was pus development in only 5.4 percent.

In a series of 32 consecutive cases attended by us, we had infection following in one case, or 3.1 percent.

Compound Fracture

In the case of compound fractures, we take a swab from the wound, for culture, before using any dichloramine-T. Then the wound is opened widely and the devitalized tissue cut away, including the edges of the external wound. Dichloramine-T is then inserted into the seat of fracture, all areas of the wound being thoroughly saturated with it. If the fracture is a recent one, that is, within three or four hours, we would close it without drainage. If over this time, we insert a gauze drain saturated with the oil. This is removed in forty-eight hours and more of the oil is injected into the wound. When we get a negative culture from the wound for three days in succession, we close it, dealing with the fracture by bone-plating or pegging, as we see fit.

Case-report.—A. K., admitted to Ward A, Toronto General Hospital, November 27, 1917, about fourteen hours after sustaining comminuted fracture of the lower end of humerus, with small lacerated wound. This wound gave us a culture of staphylococcus and streptococcus. It was opened widely, swabbed with dichloramine-T, packed with dichloramine-T gauze, and partly stitched. More oil was injected into wound through a medicine-dropper daily. Several negative cultures were obtained. About two weeks after admission, the wound was opened, the two lower fragments were fastened together with a bone-screw, and the upper fragment, when reduced, was held in place by its spiculated extremity. The wound stayed clean, and the patient was discharged five and one-half weeks later.

Secondary-Suture Cases

The question of the secondary suture of wounds is a very important one, especially from a military standpoint. One of our earliest cases is an illustration of the efficiency of dichloramine-T.

Case shown to Surgical Section in November, 1917.—E. D., admitted to Ward

A, Toronto General Hospital, September 18, 1917. About one month previously, he had had his foot crushed and a Syme's amputation was performed. The wound became infected and, on admission to the hospital, the flap had dropped down and its anterior surface as well as the end of the stump was covered with thick, unhealthy granulation-tissue, with a few small sloughs still attached. The discharge from the wound was a thick yellow pus, emitting a very foul odor. Culture showed staphylococcus-infection.

The wound was sprayed with 5-percent dichloramine-T. In twenty-four hours, the odor had disappeared and the discharge had lessened considerably. On the sixth and seventh days, we could, by direct smear, find no bacteria, and on the ninth day we scraped off the granulation-tissue and trimmed the edges of the flap and stitched it into place. There was a slight discharge from a small sinus at the side of the wound for some time, but, when a small sequestrum from the end of the stump was removed, the sinus soon closed. This illustrates a point we have proven by several cases, namely: that, if a wound does not soon become sterile under the use of dichloramine-T, it is either because the antiseptic is not getting to all parts of the wound or there is a foreign body present.

Cellulitis

The focus should be excised when mechanically practical, but, if this is impossible, it should be widely exposed so that the germicide may have an opportunity for a complete chemical contact with the bacteria. Adequate drainage should be provided according to accepted surgical principles. Then the wound-surfaces should be thoroughly covered with the dichloramine-T solution and the edges of the wound held apart by gauze packing saturated with the solution. A very light gauze dressing is then applied, not more than four layers of gauze being necessary. If the discharge is excessive, fresh gauze may be reapplied during the day, but, in our experience, this is not necessary for more than a day or two. One does not need to use thick cotton pads on these wounds. The dressing is done once a day, using all aseptic precautions. The gauze packing is removed and not reapplied unless the walls of the wound fall in and make it impossible to insert the antiseptic. Dry cotton wipes only are used to wipe out the wound. The

dichloramine-T is sprayed into the wound with an atomizer, if it is superficial, or injected into the deeper parts through a soft-rubber catheter or a glass pipette. The same minimum amount of dressing-material is used. When a culture shows the wound to be sterile, it is not necessary to do dressings oftener than once in two or three days.

Case-report No. 1.—T. B., referred to by Doctor Shields. Admitted to Ward A, February 11, 1918. Four days previously his left wrist became swollen and sore; two days later, it was swollen to the elbow. On admission, arm from wrist to shoulder was greatly swollen, brownish-red, and extremely painful. There was a small area of fluctuation over the top of the olecranon. Temperature, 103.4° F.; pulse, 140. Patient was perspiring profusely and was profoundly toxic. Operation, 9:30 p. m., February 11. Incision into the fluctuating mass over the olecranon revealed a bursa full of clear serum. Eleven other incisions, each about two inches in length, were made in the arm. From the incisions above the elbow, just a clear serum was obtained, but, from those below the elbow, a thin, watery pus exuded. The infected subcutaneous tissue was broken down with the finger. The wounds were then swabbed with 20-percent dichloramine-T and gauze packing soaked in the same-strength solution was inserted into the subcutaneous space between the incisions. A light dressing was applied and the patient returned to the ward, with orders to the nurses to keep several hot-water-bottles applied to the arm continuously. A culture of the pus showed the presence of pure streptococcus.

On the second day after the operation, the temperature was normal and remained so. On the seventh day, a culture from the wound was sterile, and on the twentieth day all the wounds were closed, except the one over the olecranon.

Case-report No. 2.—F. S., admitted to Private-Patients' Pavilion, Toronto General Hospital, under Dr. F. N. G. Starr, December 26, 1917. Three days previously, he cut his right hand on a porcelain tap. On admission, the temperature was 101° F.; pulse, 132. The hand was greatly swollen, extremely painful, and the skin over the hypothenar eminence was black and, on removal, it was found that the muscle underneath apparently was gangrenous. There was a thin, watery discharge from

all parts of the palm. The infected area was opened by four incisions and swabbed out with 20-percent dichloramine-T solution. Three tubes were inserted for drainage. Culture showed pure streptococci. On the third day, his temperature was normal, and in a week a culture from the wound was sterile, which in less than three weeks was completely healed.

Carbuncles

Until recently, we always felt that we got better results by completely excising a carbuncle. Our method of treatment has changed, however, since using dichloramine-T. We now make a crucial incision, curette out as much of the necrotic tissue as possible, insert a drainage-tube through the base of each flap, swab out the wound with 20-percent dichloramine-T solution and leave it packed with gauze soaked in the same solution. The gauze is removed the following day and replaced by fresh gauze soaked with 20-percent dichloramine-T solution. The day following, all packing and tubes are removed and the wound is thoroughly sprayed with 5-percent dichloramine-T solution. The force of the spray very soon dislodges any particles of necrotic tissue left.

We have treated several cases, however, one will serve to illustrate.

Case-report.—T. G., referred by Dr. C. E. Stacey on February 2, 1918. Carbuncle $3\frac{1}{2}$ inches in diameter on back of neck. It had several openings and was discharging profusely. It had been incised three days previously, but, was not spreading rapidly. A crucial incision, sloughs swabbed out with gauze wipes, drain put in base of each flap after swabbing out with 20-percent dichloramine-T solution. Daily dressings with 5-percent dichloramine-T solution. On the seventh day, all slough was gone. On the ninth day, the incisions were healed, with the exception of a small area in the center that was granulating over. On the twentieth day, the wound was healed.

Lee advises secondary suture if the wound becomes sterile before the twelfth day. He reports good results. We have had no satisfactory cases in which to try it.

Intraabdominal Infection

We have used dichloramine-T in several cases of appendicitis that required drainage. Our technic in these cases was, to swab the bowel in the neighborhood of the infection with 20-percent dichloramine-T

solution, pack gauze soaked in the solution into all parts of the infected area, insert through and through silkworm-gut sutures and leave them untied. In cases where the split-muscles opening was made, the two middle sutures were so inserted that, when drawn tightly, they pulled the separate parts of the internal oblique muscle together. The following daily dressings consist in applying from 2 to 3 mils of the oil around the wound and gauze, and in about four days the gauze will come out quite easily. Each day after this, the sinus is filled with 5-percent dichloramine-T solution. On obtaining a sterile culture from the wound, the sutures are tied. Sometimes only it will be necessary to leave a small opening for the gauze and to stitch up the rest of the wound. In this case, after the gauze is removed, the sinus is filled daily with oil until it fills in with granulations.

Very often appendixes are being removed, and then the question arises as to whether a tube should be put in for drainage, because of the gangrenous condition of the organ and the possibility of a small amount of peritoneal infection being present. In these cases, if one will thoroughly swab off the bowel in the neighborhood of the appendix-stump with dichloramine-T, and likewise the incision through the abdominal wall, one will find that the antiseptic is enough to take care of any infection left.

Any other intraabdominal infection can be treated in a similar manner.

Case-report.—Mr. S., patient of Dr. F. N. G. Starr. On November 14, 1917, a large appendical abscess was opened through a split-muscle incision and the appendix removed. The cavity was swabbed out with 20-percent dichloramine-T solution and packed with gauze, 20 percent. Silkworm-gut stitches were put in, but, not tied. In this case, the gauze was removed the next day by the houseman. For fourteen days, 5-percent dichloramine-T solution was injected into the sinus. On the fourteenth day, the bacterial count was 1-10. The granulations were swabbed off the surface and the stitches were tied. There was only a very slight discharge after this, and the patient walked out one month from the day he came in.

Burns

It appears to us that in the treatment of burns there are three things to accomplish:

(1) the relief of pain, (2) the control and elimination of infection, and (3) the promotion of healing. The first point is accomplished if a dressing is used that does not cause pressure or irritation of the wound; the second is obtained if an efficient germicide is used—for, all burns are infected; the third results from the use of a dressing that does not need to be changed frequently, thereby causing the least disturbance to the delicate newly formed epithelial cells, and from the use of an antiseptic that does not injure the newly formed cells nor cause the formation of unhealthy granulation-tissue.

As a dressing for burns, we use an open-mesh paraffined mosquito-netting, as suggested by Captain W. P. Furness,⁸ of Philadelphia. It is made by dipping sterilized mosquito-netting into melted paracol or other wax of low melting-point and allowing to drain. This results in a thoroughly waxed open-meshed gauze. This is placed in close contact with the surface of the burn and fastened around the edges with hot wax or adhesive. No other dressing is put over this but it is left exposed to the air. The wound is sprayed with 1 or 2 percent dichloramine-T daily. As the discharge forms, it comes out through the open-meshed gauze and can be picked off at each dressing with a forceps without removing the gauze. This is a painless procedure and does not interfere with the delicate newly formed tissue. As the dichloramine-T is not an aqueous but an oily solution, it does not tend to make the granulation-tissue edematous, but, rather, we note that it is of a very bright-red, healthy color and does not heap up. We feel that this dressing deals with the three essentials in the treatment of burns as efficiently, if not more so, than any other.

Case-report.—J. W., February 21, 1918. The patient fell with the forearm against the stove, causing a burn of the third degree, and tipped hot gravy over the arm, causing a scald about 8 by 5 inches. When he was seen next day, the blisters were broken and considerable discharge was present. The wound was cleaned with dry wipes and dressing-forceps. The edges of the wound were cleaned with gasolin. Paraffined gauze was fastened on with adhesive plaster. This was sprayed with 5-percent solution of dichloramine-T in

⁸. Communication from Capt. W. E. Lee, Philadelphia.

chlorcosane. Was dressed daily. The crusty discharge was removed with a forceps from the surface of the netting and the latter sprayed with 1-percent dichloramine-T solution. The dressings were painless and easy. On the tenth day, the scald-wound was healed and on the nineteenth day the burn-wound was healed.

Skingrafts

It has heretofore been considered impracticable to skingraft wounds that were not sterile, partly because the grafts would not take and partly because antiseptic dressings could not be used, for fear of destroying the grafts. We have found that it is not necessary, although it is to be preferred, to have the wound absolutely sterile. We get the wound as sterile as possible, lay our grafts and cover them with the paraffined netting spoken of above. This is left exposed to the air. Each day the discharge that forms is removed from the outside of the netting and the whole wound is sprayed with 1-percent dichloramine-T solution. About the tenth or eleventh day, the netting is removed without any difficulty whatever. It shows no tendency to adhere to the wound or the grafts.

We have had several good cases, but, two of them will serve to illustrate.

Case-report No. 1.—G. H. A., admitted to Toronto General Hospital, under Dr. F. N. G. Starr, on January 21, 1918. Seven weeks previously, he scalded his left leg to the knee. The wound became infected, and among others, the following dressings were used: moist boric acid, 1 : 100 bichloride of mercury, 1:100 carbolic acid, boric-acid ointment, ambrine, physiological saline solution, and Dakin's solution. None of these were efficient, and when the patient was admitted to the hospital, the most of the surface of the leg was devoid of skin and discharging a foul, purulent matter. It was cleaned and swabbed with 20-percent dichloramine-T solution, and he suffered for some hours. The next day, he told us the leg had not looked as well in seven weeks. We used 5-percent dichloramine-T solution daily, and as soon as the infection became controlled the skin grew in very rapidly. On the seventh and ninth days, a culture from the wound was sterile, and in the tenth day it was skingrafted. Daily dressings were done, each time removing the discharge that had come through the netting, without disturbing the

grafts. At first, we had physiological saline solution sprayed on the wound every hour. We have since come to the conclusion that that is unnecessary. Daily applications of 1-percent dichloramine-T solution with an atomizer is all the dressing necessary to keep the grafts soft. On the eighteenth day, the netting was removed and the graft had practically all taken. This man walked out of the hospital about six weeks after the operation.

Case-report No. 2.—W. B., admitted to Ward A, Toronto General Hospital, January 21, 1918. His hand was crushed between steel rollers, the skin being pulled off and several of the phalanges fractured. The tips of fingers were all amputated and the hand was dressed with dichloramine-T solution. Pyocaneus-infection followed. This was very difficult to clean up, but, when the wound was granulated over and all sloughs were removed, even when the pyocaneus was still present, we skingrafted. This was covered with the netting, and dichloramine-T solution was applied daily. The graft took perfectly and in four weeks all dressing was removed from the hand.

We have no experience with the use of dichloramine-T in brain-work, but, Harvey Cushing⁷ reports as follows:

At a casualty clearing station in France, in three months, they had 733 cases of wounds, with dural penetration. Among the first 44 cases, they had 24 deaths, or 54.5 percent. Among the second 44 cases, they had 18 deaths, or 40.9 percent. Among the third 45 cases, they had 13 deaths, or 28.8 percent.

He attributes the lowering of the death rate to four principal changes in their technic, namely: (1) the removal *en masse* of the fractured area of the cranium; (2) the probing of the wound in the brain for foreign particles with a soft-rubber catheter, instead of with the finger; (3) the removal of the disorganized brain-tissue by gentle suction through a catheter; and (4) the routine use of dichloramine-T. In speaking of the last point, he says:

"The use of watery solutions of antiseptics in the brain is disappointing, for, they lead to edema and swelling of the tissue and an increased tendency to herniate. It was not until Dakin's dichloramine-T came to be utilized as a routine during the latter weeks of our service that there was a

notable diminution in the number of infections.

"It is true that the technic of the procedure had greatly improved at this time and it is true also that we can record no thoroughly conclusive bacteriological studies, though cultures of many of the wounds and foreign bodies were made, with dichloramine-T in not a few cases in which an infected foreign body was removed and in which bone fragments as well gave an abundant growth, no symptoms whatever followed closure of the wound without drainage. In two instances, the cultures showed the presence of the pneumococcus in the ventricular fluid, and the only patients in the series who have recovered from active gas-infection of the brain were treated with dichloramine-T."

Cushing used a soft catheter to inject a few mils of dichloramine-T solution to the bottom of the cavity and then moistened the surface of the external wound with it before sewing up.

Tuberculous Wounds

Our experience with the use of dichloramine-T in tuberculous wounds has been limited, owing to the unsatisfactory results obtained in a couple of cases some months ago. Following this, we treated some active tubercle-bacilli with dichloramine-T for varying lengths of time, by putting an emulsion of the bacteria on some dichloramine-T in a test tube. The chlorine from the dichloramine-T gradually infiltrated the emulsion. In three, five, fifteen, thirty, and sixty minutes, and, again in twenty-four hours, we removed part of the emulsion and injected it into guinea-pigs. Up to and including the thirty-minute case, the bacilli grew, but, from one hour and longer, the guinea-pigs tests were negative.

When we remember that it takes a 5-percent carbolic-acid solution with an equal quantity of sputum, intimately mixed, about twenty-four hours to kill the tubercle-bacillus, and that 2.5-percent carbolic acid will not even kill them⁹, we can not help but feel that dichloramine-T is efficient also for tuberculous wounds. Further experiments are being carried on now.

Empyema of the Pleural Cavity

Our experience with dichloramine-T as a sterilizer for empyema-cavities has not been altogether encouraging. Two acute cases, following pneumonia, had a short

convalescence that was very satisfactory. Three old cases, in which the cavity had been draining for from three to twelve years, were treated by means of the Estlander operation, and, shortly afterward, dichloramine-T solution was injected into the remaining cavities. The oldest case closed in a few weeks; in the second case, the cavity diminished to one-fourth the former size in two months. We are hoping it will close completely. The cavity in the third case is practically the same size as it was when we started the treatment. This patient had syphilis until recently, which may account for this poor result.

One gratifying point about the use of dichloramine-T in these cases is, that the patients all feel better and apparently there is much less toxin absorbed as long as the oil is being used.

Our technic has been, to insert a soft-rubber catheter into the cavity and inject through it from 5 to 20 mils of the oil. Then we have the patient moving slowly into different positions, in order to get the oil to flow to all parts of the wound. This dressing is done once a day.

From several of our cases, we have obtained a negative culture after several days' treatment; but, if we discontinue the injections for a few days, the bacteria again appear.

It may be that, if at the time of the Estlander operation a strong solution of the antiseptic were used before sewing up the skin wound or the cavity were packed with gauze soaked in the oil, the results would be a little more satisfactory.

Mastoiditis

From reports received from several of the ear-, nose-, and throat-men that are using dichloramine-T in mastoid infections, I gather that it also is effective in those conditions. Dr. Charles Clark tells me of three bad mastoid-cases that closed completely in eleven, twelve, and fourteen days respectively. He notes particularly the early disappearance of pus, the healthy appearance of the granulations, and the rapid closing of the wound.

Urethritis

I have just used dichloramine-T in one case of gonorrhreal infection. In this case, I sealed the oil in the urethra and left it there for nine hours. The patient complained the next day of pain on micturition, but, I have been unable to find any trace

⁹. Kolle und Wassermann, "Handbuch der Pathogenen Mikroorganismen".

of gonococci in the smears since then. I would advise, instead of sealing in the oil, that it be held in for ten or fifteen minutes, only. It must be noted here that only solutions in chloroform should be used. Solutions in eucalyptol would cause irritation. Doctors Jones and Hair are going to use it in the Genitourinary Clinic at the Toronto General Hospital.

Diphtheria-Carriers

When Dakin first suggested the use of dichloramine-T as an antiseptic, he used it to disinfect the nose and throat of diphtheria- and meningitis-carriers. When the technic is properly carried out, this makes a very efficient treatment. Saline solution should be used first, to clean out the nares and throat, and then the dichloramine-T in 5-percent solution sprayed on with an atomizer every three hours. Spraying should be discontinued for twenty-four hours previous to taking a culture, and, if it proves negative, the spraying is again discontinued for twenty-four hours. In the case of getting two negative cultures, the patient may be considered no longer a carrier. We had a very good opportunity recently to test this out. Dr. W. C. Allison, of the Provincial Board of Health spent some weeks in a western town combating an outbreak of diphtheria. They used dichloramine-T in fifty-nine cases. These cases had been quarantined on an average of fourteen days and they were released after using dichloramine-T on an average

for five days. Nurses gave all the treatments, which were carried out, not every three hours, but, only three times a day. Those who have worried over these cases for weeks, and maybe months, will realize with satisfaction how quickly these carriers were cleaned up.

Colonel Primrose, who has seen at first hand the results obtained by the originators of several of the modern methods of treating infected wounds, warns us that we must keep an open mind regarding this question. They all claim to get good results, and he has seen that they are doing so. All others do not get these good results, no doubt because they do not know or do not adhere to the proper technic. We know that dichloramine-T will sterilize infected wounds if it gets into every part of the wound and there are no foreign bodies present, and we feel that, as the technic is so simple and the results are just as good, we have in dichloramine-T an antiseptic that is, at the least, among the best.

I should like to thank Captain Roscoe R. Graham for inducing me to take up this study; Dr. F. N. G. Starr, for furnishing most of the clinical material and much encouragement; Captain Walter Campbell, for his help with the chemistry and laboratory-work, and Doctor Laughlen, for his assistance with the bacteriological work. Without the help of these, my work would have been without results.

Procaine-Anesthesia for Surgical and Dental Operations

By F. H. McMECHAN, M. D., Avon Lake, Ohio

PROCaine is a low-toxicity substitute for cocaine for almost every form of local anesthesia (*pro*=for; *caine*=cocaine). It is the American *novocaine*, manufactured under the license of the United States Federal Trade Commission, a license which practically guarantees its purity, potency, and availability at a reasonable price.

Pharmaceutical Aspects

Introduced by Einhorn, in 1905, as *novocaine*, *procaine* is a synthetic monohydrochloride of para-aminobenzoydiethylamino-

ethanol. It crystallizes from alcohol in colorless needles. Its melting-point is 156° C. It is soluble in equal parts of cold water and the solution has a *neutral reaction*. In cold alcohol, it is soluble in the ratio of 1 : 30. The solution can be heated to 120° C. without decomposition. Caustic alkalis and their carbonates precipitate the free base from the aqueous solutions in the form of a colorless oil, which soon solidifies to a crystalline mass. Alkaloidal reagents, such as potassium mercuric-iodide,

picric acid, and iodopotassium iodide solutions, produce precipitates even in very dilute aqueous solutions of procaine. While sodium bicarbonate dissolves in the aqueous solution without causing turbidity, it constitutes a disturbing ingredient and preferably is avoided. Solutions should be made with sterile, freshly distilled water or physiologic saline solution or modified Ringer's serum, and be kept in nonalkaline, nonactinic glass containers having air-tight stoppers.

Procaine powder and its solutions of concentrated strength are *nonirritating* to mucous surfaces, the cornea, sensitive wounds or other tissues, including nerves. Solutions possess slight antiseptic properties and may be sterilized repeatedly without, apparently, affecting their analgesic effect, and may, *without deteriorating*, be kept for longer periods than can other anesthetic agents. *After adrenalin has been added to the procaine solution, the mixture may be boiled for a very short time, only, as the adrenalin loses its activity by continued boiling and the drug itself becomes decomposed.*

Only *freshly* and *properly* prepared solutions can be used with any degree of safety. These should not come in contact with anything but the porcelain cups in which they are mixed, diluted, and sterilized and the syringes with which they are injected. The latter must be scrupulously freed from sterilizing fluids, such as alcohol-glycerin or solution of sodium carbonate.

Solutions are chemically changed by *air, heat, light*, and, especially, *alkalis*. Tablets, as marketed, as a rule, are sterile and should not be touched by the hands or non-sterile instruments, while their container should be closed air-tight immediately after use. Tablets readily become deteriorated by *air, light*, and, especially, moisture. Exposure must be guarded against when salt is used as an ingredient, because of its hygroscopic nature when not chemically pure. Tablets must be *white*; if *discolored*, they should be *discarded*, as their use involves danger. Ampules should be opened and their fluid contents handled under *rigid aseptic precautions*.

Solutions made with tablets or withdrawn from ampules must be *crystal-clear*. If they show even the slightest *pinkish discoloration*, they should not be used. The physiologic saline solution or modified Ringer's fluid, designed for preparing or

diluting procaine solutions should be made, invariably, from *freshly distilled* and *sterilized* water and chemically pure and sterile ingredients.

Comparative Efficiency

Torald Sollman, (*Jour. Amer. Med. Ass'n*, Jan. 26, 1917, p. 216), in recent researches for the Council of Pharmacy and Chemistry of the American Medical Association, has formulated certain results from his studies of the comparative efficiency of local analgesics, based upon animal-experimentation and clinical observation, (*Charts 1 and 2*).

Rapidity of the Onset of Action.—This has no practical importance for infiltration and only slight significance for surface anesthesia. For the cornea, with the minimal effective concentration, the various anesthetics may be arranged under three groups:

Most-rapid: Tropococaine, alypin, quinine-urea.

Intermediate: Beta-euacaine.

Slower: Cocaine, procaine, holocaine.

Duration of Action.—This varies mainly according to the rate of absorptive removal. It is of some practical importance for surface and subdural anesthesia, but, not for infiltration-anesthesia, in which the duration can be prolonged at will by the addition of adrenalin, except with tropococaine. The time required for complete recovery after the application of the minimal concentration producing complete anesthesia of the cornea, was:

Ten to fifteen minutes: cocaine, tropococaine.

Twenty to thirty minutes: alypin, beta-euacaine, holocaine.

Fifty minutes: procaine.

Sixty-five minutes: quinine-urea.

CHART 1. EFFICIENCY OF ANESTHETICS IN INJECTION-ANESTHESIA.

<i>A. Intracutaneous-method infiltration and injection.</i>		
Percentage	Efficiency-ratio	
1-32 Procaine, cocaine, tropococaine, and alypin hydrochloride	1	
1-16 Beta-euacaine hydrochloride.....	1-2	
1-8 Quinine-urea hydrochloride.....	1-4	
1-4 Apothesine, antipyprin potassium sulphate....	1-8	

B. Sensory Fibers of Nerve-Trunks

Percentage	Efficiency-ratio
1-4 Procaine, cocaine, tropococaine.....	1
1-2 Alypin, potassium chloride.....	1-2
2 Quinine-urea	1-4
8 Antipyprin	1-32

C. Motor Fibers of Nerve-Trunks

Percentage	Efficiency-ratio
1-8 Procaine, cocaine, tropococaine.....	1
1-6 Alypin	3-4
1-4 Potassium chloride	1-2
1 Quinine-urea, antipyprin	1-8

CHART 2. EFFICIENCY OF ANESTHETICS IN SURFACE ANESTHESIA.

A. Cornea; Surface anesthesia of mucous membranes

Percentage	Efficiency-ratio
1.2 Cocaine hydrochloride.....	1
1 Beta-eucaine	1.2
2 Tropococaine, alypin, quinine-urea.....	1.4
4 Apothesine	1.8
9 Procaine	1.16
10 Antipyrin	1.20

B. Frog skin

Percentage	Efficiency-ratio
1.16 Tropococaine	1 1.3
1.12 Cocaine, alypin	1
1.2 Procaine	1.5
1 Potassium sulphate chloride.....	1.12
2 Antipyrin	1.24
4 Quinine-urea	1.50

Alkalization.—Sollman's results confirm those of Gros, that the addition of alkali increases very noticeably the efficiency of procaine, cocaine, and allied analgesics, doubtless because the free anesthetic bases penetrate more readily than do the salts, not only the motor nerve-trunks, but, also, the sensory fibers of the nerve-trunks, frog skin and cornea. On the other hand, no potentiation occurs after intracutaneous injection, evidently because this does not require penetration. Accordingly, the addition of sodium bicarbonate, as suggested by Gros, serves no useful purpose for infiltration-anesthesia. It may be of some use for *Intraneural* and possibly for *subdural* injections and is definitely useful for *surface* anesthesia. For these uses, the anesthetic should be made up in *double concentration* and be *diluted*, just before use, *with an equal volume of 0.5-percent sodium bicarbonate*. This increases the efficiency for the cornea as follows:

Cocaine, from one to two times.

Beta-eucaine, two times.

Procaine, from two to four times.

Tropococaine or alypin, four times.

This effects a considerable saving in anesthetic; but, it is uncertain as to whether or not it modifies toxicity. An alkali should not be added to holocaine or quinine-urea.

Adrenalin.—This agent, originally advocated by H. Braun, for prolonging the analgesia of procaine, acts solely by preventing the absorptive removal of analgesic drugs by virtue of its vasoconstrictor effect, and not because of any true synergism. The addition of adrenalin, (about 1 : 50,000) for injection-anesthesia (except with tropococaine, which destroys its vasoconstrictor action), prolongs the duration of analgesia, reduces the amount of procaine required, and diminishes the chances of systemic toxicity by delaying absorption. For *surface* anesthesia, adre-

naline rather diminishes the penetration of procaine and, therefore, the efficacy of local anesthetics on mucous membranes. Its use for *intraneurial* and *subdural* injection is of doubtful value. It is indicated, however, for securing a bloodless operative field.

Efficiency of Combination.—The efficiency of mixtures of local anesthetics, according to Sollman, corresponds to more or less complete summation without any potentiation. The single exception, experimentally, is the potentiation of potassium with certain other anesthetics, discovered by Hoffman and Kochman, which has been confirmed for motor paralysis, but, not for sensory anesthesia. Quinine-urea in combination with procaine, while not potentiating the immediate anesthetic effect, provides a period of prolonged analgesia, post-operatively, in certain otherwise painful areas and proves a desirable mixture in practice.

Conclusion

The consensus among most research-workers and clinicians is, that procaine, when injected, has the same efficiency as cocaine in obtunding peripheral nerve-endings or sensory and motor fibers of nerve-trunks, even when used in low-percentage solutions. Thus, a 0.24-percent solution is as immediately analgesic, intracutaneously, perineurally or intraneurally as cocaine, and a 1.5-percent solution suffices to obtund such thick nerve-trunks as the sciatics and sacrals in about ten minutes. However, when applied locally to mucous surfaces, the cornea, nasal membranes, pharynx, larynx, urethra or bladder, procaine solutions are only about one-third as efficient as cocaine, although *decidedly less toxic and virtually nonirritant*.

Systemic Effects

Ordinarily, the systemic effects after the injection and absorption of procaine are scarcely noticeable, neither the circulation nor respiration being unfavorably influenced. Usually the heart's action is entirely unaffected. Kymograph tracings of blood pressure and respiration exhibit virtually no change when from 0.15 to 0.2 Gram of procaine has been injected subcutaneously in rabbits.

Procaine does not produce mydriasis (except in toxic dosage), disturbances in accommodation, nor does it increase intraocular tension. The solutions and powder

not only are nonirritating, but, have been prolongation of the local analgesic power.

Procaine has a transitory vasodilator effect; however, this may be entirely counteracted by combination with adrenalin with consequent intensification and prolongation of the local analgesic power.

Toxic Symptoms

Following the injection of large doses in susceptible individuals, procaine may induce tonic-clonic spasms, together with opisthotonus, agitation, and excitement, together with accelerated and shallow breathing, resulting in respiratory arrest; or, vomiting, pallor, and circulatory disturbances of cardiac failure.

Liebl (*Beitrage z. Klin. d. Chir.*, 1907, *lvi*, p. 244), experimenting upon himself, to test the toxic effects of procaine, after injecting 0.75 Gram of a 10-percent solution into his thigh, felt a sudden warmth in the whole body, especially in the hepatic region; also nausea and inclination to vomit, and general restlessness. Two minutes later, slight deafness occurred in his left ear; further, there was some disturbance of vision double vision being produced and accommodation being difficult in both eyes. Thirteen minutes after the injection, headache supervened and somewhat later a paresthesia in the radial region. Within half an hour, the symptoms had disappeared.

While exhilaration regularly occurs after cocaine, procaine-“jags” are a rarity; still, they do happen occasionally, extreme *talkativeness* being the predominant symptom. *Hysterical seizures* have infrequently been reported as a complication of local anesthesia, and they may be of strictly neurotic etiology or may indicate a delayed toxic manifestation of procaine of undiagnosed endo- or myocardial pathology.

Fortunately, so far as clinical evidence and experience can predicate, *procaine is not a habit-forming drug*. This peculiar characteristic is of vital importance to surgeons, specialists, and dentists.

Comparative Toxicity

In the opinion of most research-workers and clinicians, procaine, after twelve years of experimental investigation and routine surgical and dental employment, still is considered as from one-fifth to one-seventh as toxic as cocaine. George B. Roth (“U. S. Hygienic Laboratory Bulletin” No. 109, Dec., 1916, and *Jour. Nat'l Dental Ass'n*, 1917), Robert A. Hatcher, and Cary Eggleston, (*Jour. Pharmacol. and Exper. Therap.*, Vol. viii, No. 7, July 1916), and

J. Rilius Eastman, Bernard Erdman, and Harry K. Bonn, (*Ann. Surg.*, May, 1916), have recently reviewed the comparative toxicity of procaine and other local anesthetics in a comprehensive and painstaking manner and have separately arrived at about the same conclusions.

Summary of the Experimental Results in Animals

The relative toxicity of procaine and cocaine, as shown by animal-experiments, varies; the variant being dependent, mainly, upon the animal employed in the tests. The relative toxicity of procaine and cocaine for various animals, when given *subcutaneously*, is as follows.

Experimental animal.	Cocaine ratio	Procaine
Frogs (<i>rana pipiens</i>).....	1.0	1.4
Mice	5.5	1
Rats	10	1
Guinea-pigs	10	1
Rabbits	5.3	1

Both cocaine and procaine *increase blood pressure and respiration in small doses and depress in large doses*. When given subdurally, the relative toxicity of cocaine and of procaine is virtually the same, as shown by the comparative effects upon blood pressure and respiration. Death in rabbits, after cocaine or procaine, usually is respiratory, but, from procaine, under certain conditions, death may be cardiac (Roth).

The toxicity of procaine is increased, but, in variable degree, by the previous administration of respiratory depressants (Hatcher, Eggleston).

Procaine leaves the blood stream quickly, it being fixed or destroyed in the liver; the weight of evidence pointing to its destruction in that organ (Hatcher, Eggleston). This experimental observation questions the deduction drawn by Morian, (*Ztschr. f. Chir.* No. 28, 1915, p. 493), that procaine occasions albuminuria—a postoperative complication that he observed in a fairly large percentage of his patients that had been operated upon under local anesthesia.

Relation of Laboratory Findings to Clinical Observations

The toxicity of cocaine and procaine for man appears to vary even more widely than for the laboratory-animals. Toxicity for both depends upon the mode and site of injection, as well as upon the concentration of the solution and the amount of the drug employed. Occasionally, toxic symptoms may be owing to the accidental or inadvertent injection of procaine directly into the circulation, especially in highly vascular structures encountered in certain oper-

ative fields; or, they may be precipitated or intensified by some pathological condition of the patient under operation.

Individual susceptibility is marked both in animals and in man. In subjects having low blood pressure or cardiac disease, procaine, as well as all other analgesics, must be used with caution, inasmuch as the laboratory-experiments indicate a depressing effect upon the heart-muscle when large doses of procaine are given (Roth).

Geoffrey Marshall (*Trans. Anest. Sect., Royal Soc. of Med.*, 1917; *Amer. Jour. Surg.*, April, 1918), after an extended experience at an advanced casualty station on the Somme, has concluded that: *spinal anesthesia is especially dangerous for wounded soldiers whose hemoglobin test and blood-pressure reading indicate hemorrhage, actual or concealed; primary or secondary wound-shock; circulatory stasis, with deconcentration of blood volume; or cardiac depression from increased heart load.*

It is quite possible that a normal or subnormal hemoglobin-index and a normal or increased heart load, respectively, may become the determining factors of safety, or of danger, in obviating the occurrence of toxic complications under procaine-anesthesia.

Physiologic Antidotes and Restorative Measures

J. E. Engstad. (*Amer. Jour. Surg. Anest. Suppl.*, Jan., 1916, p. 5), has frequently reiterated his announcement, in 1910, that *ether is the physiologic antidote for cocaine- and procaine-poisoning.*

Local analgesics lower blood pressure, with a tendency to inhibit the complete systolic action of the heart, especially the right side. They also inhibit the respiratory function, by poisoning the respiratory centers of the brain: the heart becomes flabby and there is, also, an overstimulation of the accelerator nerves. When the right side of the heart does not synchronize in systole and diastole, this form of heart-block may be owing to the effect of local analgesics upon the bundle of His, by direct action of these drugs circulating in the blood. Professor Corbett, of the University of Minnesota, reports that: the injection of solutions of procaine directly into the veins of unanesthetized animals frequently produces toxic symptoms, manifested by tetanic spasms of the voluntary muscles of the back and by marked respir-

atory embarrassment. *In these cases, a fatal outcome can be prevented by the administration of ether.*

Ether is a rapidly acting, diffusible cardiac, vasomotor and respiratory stimulant; it increases blood pressure initially and apparently has a special antidotal effect upon the toxic elements of the diffusible alkaloids. Ether is administered by the drop-method, as for surgical anesthesia, to the stage of stimulation. It is almost immediately effective and is equally as efficient an antidote for poisoning by camphorated oil.

Clinically, sufficient attention has been not paid to fearful patients, who, as a class, are prone to collapse or show toxic symptoms under local as well as general anesthesia. H. Scholz (*Beit. z. Klin. d. Chir.*, June, 1914), has observed that, while patients who dread operations may attempt to conceal their fear under a placid exterior, their real condition generally is revealed by some disturbance of visceral or vaso-motor innervation, such as tachycardia, pseudoangina, polyuria, glycosuria, diarrhea, angioneurotic edema, shallow and sighing respiration, pallor and dryness of the mouth. Such patients, as a rule, are the victims of some serious undiagnosed pathology. Thus, the so-called *hysterical heart* is almost always indicative of endo- or myocardial involvement dependent upon focal infection. Abnormal fear will precipitate *acapnia* under general, and reflex syncope under local anesthesia. Mere fainting must be differentiated from actual procaine-poisoning in susceptible individuals.

Hemorrhage during operation may so diminish the blood volume that an otherwise innocuous dose of procaine may precipitate toxic symptoms. S. Salinger, (*Ther. Gaz.*, Jan., 1918, and *Amer. Jour. of Surg., Anesthesia Suppl.*, Oct., 1918, p. 124), emphasizes the value of a preliminary injection of *pituitrin* (1 mil) in nasal and oral operations under general and local anesthesia, as a prophylactic measure against intoward symptoms, especially hemorrhage. Pituitrin, given intramuscularly, is, perhaps, the best circulatory stabilizer before and after operation.

Pursuing the handling of toxic conditions to a conclusion, C. W. Allen, ("Local Anesthesia," 1914) thus recapitulates: "With the onset of the first symptom, immediately place the patient in a recumbent position

and lower the head; if the operation has been on an extremity, apply a constrictor proximal to the field; give aromatic ammonia or else amyl nitrite by inhalation; if the case seems severe, lightly narcotize with ether by the drop-method; use digitalis or camphor in oil by hypodermic injection, if the heart is weak; in a severe case, use infusion of saline solution (preferably containing pituitrin); should the respiration cease, artificial respiration should be resorted to and persisted in as long as the pulse or heart-beat is perceptible—or even longer, as there may be a chance of resuscitation. When the facilities are at hand, use the Meltzer-Auer endotracheal intubation for the purpose of maintaining prolonged artificial respiration.

Solutions.—The following percentage-solutions recommended by H. Braun have established themselves in routine use:

Solution 1.

Procaine	Gm. 0.25
Physiologic saline or Ringer's fluid	Gm. 100.0
Adrenalin solution (1:1000).....Gtt. 5	

Solution 2.

Procaine	Gm. 0.25
Physiologic saline or Ringer's fluid	Gm. 50.0
Adrenalin solution (1:1000).....Gtt. 5	

Solution 3.

Procaine	Gm. 0.1
Physiologic saline or Ringer's fluid	Gm. 10.0
Adrenalin solution (1:1000).....Gtt. 10	

Solution 4.

Procaine	Gm. 0.1
Physiologic saline or Ringer's fluid	Gm. 5.0
Adrenalin solution (1:1000).....Gtt. 10	

The 1-percent procaine-adrenalin solution serves almost all purposes and is most suitable for general practice. Without fear of toxic secondary effect, 21.5 Grams of procaine (250 mils of a 0.5-percent or else 1.25 mils of a 1-percent solution) and more may be injected. If a 2- or 4-percent solution is employed, a dose of 0.8 Gram of procaine (40 to 50 mils of these solutions, respectively) should not be exceeded; and, for injections into tense or vascular tissue, such as the gingiva, a less dose will suffice. On the whole, little attention need be given to the dosage of procaine, unless, as Braun warns, an attempt is being made to operate under local anesthesia in all but hopeless cases that present an enormous operative field. To this feature of procaine, the re-

markable progress of local anesthesia is in large measure due.

Manufacturers of procaine now market tablets of varied formulas for preparing percentage-solutions. Some of these formulas are also marketed in ampules, containing procaine or procaine-adrenalin solutions ready for use or dilution, to meet the requirement of different injections and methods.

The more popular of these formulas are the following:

Formula 1.

Procaine	Gm. 0.125
Adrenalin	Gm. 0.000125

This tablet, dissolved in 25 mils of physiologic saline or Ringer's fluid, gives a 0.5-percent solution; in 10 mils, a 1.25 percent, and in 5 mils a 2.5 percent solution. These solutions correspond to those advocated by Braun.

Procaine	Gm. 0.1
Adrenalin	0.00025

This tablet dissolved in 100 mils of physiologic saline or Ringer fluid gives a 1 percent solution for perineural or intraneural injections.

Formula 3.

Procaine	Gm. 0.05
Adrenalin	0.000083

Three tablets dissolved in 3 mils of serum give a 5-percent solution useful for lumbar anesthesia.

Formula 4.

Procaine	Gm. 0.02
Adrenalin	Gm. 0.00005

This tablet dissolved in 1 mil or 2 mils of physiologic saline or Ringer fluid gives a 2- or 1-percent solution, respectively and is a routine dental formula.

Formula 5.

Procaine	Gm. 0.015
Adrenalin	Gm. 0.00005

This tablet dissolved in 1 mil physiologic saline or Ringer fluid gives a 1.5-percent solution.

Formula 6.

Procaine	Gm. 0.05
Adrenalin	0.00005

This tablet dissolved in 1 mil physiologic saline or Ringer fluid gives a 5-percent solution; in 2.5 mils a 2-percent solution. Adrenalin solution (1:1000) may be added in drops as desired.

Formula 7.

Procaine	Gm. 0.01
Adrenalin	Gm. 0.0002

This formula is marked as a pluglet for pressure anesthesia in dentistry.

Procaine soluble in oils also is available for use in oto-rhino-laryngology, usually in 10-percent solution for local application, spraying, and inhalation.

Procaine nitrate, having the same action and uses as the hydrochloride, is preferably

used in combination with the silver salts, with which it forms no precipitate. It is efficient and dependable for this purpose, in 3-percent solution.

For *internal use*, procaine is preferable to cocaine, because of its less toxicity and the fact that it is not habit-forming. Up

to 0.5 Gram, it may be administered to adults.

In preparing solutions from tablets with physiologic saline solution or Ringer's fluid, it is advisable to counteract any alkali effect by adding 3 drops of official dilute hydrochloric acid to 1000 mils of solution.

Intestinal Disinfection with Chlorazene*

By P. CARNOT, M. D., and TH. BONDYOU, M. D., Paris, France

WE know how defective still are the methods of intestinal disinfection. Calomel, betanaphthol, benzonaphthol, salol, and the other but slightly soluble phenol compounds have been employed with relative and often disputed success. Furthermore, disinfection by means of bacterial intestinal therapy (with the lactic-acid fermenters), has not given the results that we expected from it. Hence, the problem remains an open one, yet, it is one that still has an importance of the first order.

We have tried to utilize as intestinal antiseptics the chlorine derivatives known for a long time in the chemical laboratories, but only recently studied clinically by Chattaway, Dakin, and others as to their utility in disinfecting wounds.

These compounds, in which the chlorine is held in a nitrogen grouping, have the advantage of joining a feeble toxicity to an antiseptic power of high degree. Their slow decomposition, during which the alkaline hypochlorites are liberated, confers upon them an indirect oxidizing power and increases their microbicidal action.

The chloramines which were selected for experiment were the sodium paratoluenesulphochloramide (chlorazene)¹ and paratoluenesulphondichloramine, or dichloramine-T. Chlorazene, which we are employing, is a white crystalline powder, nearly inodorous when unaltered, quite stable in the dry state, very soluble in water, while its solution remains stable for a considerable time in the presence of light. It is prepared, as a rule, by allowing sodium hypochlorite in alkaline solu-

tion to act upon paratoluenesulphonamide, the latter a product derived from a residue in the preparation of saccharin; hence, its facility of preparation and its cheapness.

We will epitomize (A) our experimental researches, and (B) our clinical researches.

A. Experimental Researches

First of all, let us determine (1) its bactericidal and antiseptic power; (2) its action upon the organism and, notably, its general and local toxicity; (3) its fate in the digestive canal, particularly the action of its diverse secretions upon the substance, and, reversely, its action upon these secretions; (4) the conditions capable of preventing its rapid absorption owing to its great solubility, and of maintaining it for a sufficiently long time in contact with the intestinal contents on which we wish it to act.

1. *Bactericidal Action*.—According to the experiments of Dakin, chlorazene can be utilized in a concentration much greater than the hypochlorites (i. e., of 2 to 4 percent). Its action is similar to that of the hypochlorites, but, its antiseptic power is superior—four times greater in an equivalent molecular concentration.

Staphylococci suspended in water are killed in two hours by a concentration of 1:1,000,000. In the presence of albumin (horse-serum), the concentration necessary to be bactericidal is 1:2,500. On the other hand, the bacillus pyocyaneus, the bacillus of Eberth, and the bacillus coli, are more resistant than the staphylococcus, while the bacillus perfringens and the streptococcus are more easily destroyed.

According to our experiments with various intestinal microbes, we have observed that cultures of the bacillus typhosus and paratyphoid A and B bacilli are

*Reprinted from *Paris Médical* for December 7, 1918.

¹In translating the article, we have used the word Chlorazene for this body, this being the name by which it is most generally known in this country.

destroyed at the end of twenty-four hours, beginning with a concentration of 1:5,000; at 1:10,000, cultures still develop, but, they are feebler than the control-cultures and the motility of the different organisms disappears completely.

There is experienced more or less difficulty in implanting the colon-bacillus on bouillon in the oven at 37° C. at 1:10,000, 1:5,000, and 1:2,000, while no culture at all forms at 1:1,000. The results are identical when implanting directly from the stools. In bile and pancreatic juice, even with a solution of 1:1,000, while no putrefaction occurs, there still results a culture.

With amebic dysentery, a solution of 1:2,000 has no effect either upon the life or the motility of the amebas.

The deodorizing action of chlorazene, even in a non-sterilizing dose, is twice as great upon the different cultures of the intestinal microbes, as is also the case with many of the other chlorine compounds.

2. Toxic Action, General and Local.—Before administering the substance, it is necessary to determine its general toxic power, as well as its local harmful action upon the mucosa. Its toxicity is feeble. A rabbit tolerates more than one Gram per kilo-weight given subcutaneously (Daufrèsne). We have caused a guinea-pig of 400 Grams to swallow 0.2 Gram (3 grains) without bad results (approximately 0.5 Gram per kilo), this corresponding to a dose of about 30 Grams for a man of average weight. This slight toxicity renders it unnecessary to investigate the experimental lethal dose.

The local causticity likewise is negligible, and is much less than that of the hypochlorites, even when these are neutralized with boric acid (Dakin) or with sodium bicarbonate (Daufrèsne). Dakin insists that, the chlorine being already attached to nitrogen, chlorazene has not, like the hypochlorites, the power of destroying necrosed tissue. This fact, important for the dressing of wounds, has for us but a relative interest.

On the tongue, the contact of powdered chlorazene is not caustic, although a moderate and quite endurable chlorine-taste is quickly perceived.

In the stomach, the ingestion of the powder in a cachet or tablet generally causes no disagreeable sensations. In some sensitive hyperchlorhydrics, the substance thus ingested, gives rise to a slight

burning sensation; but, ordinarily, patients, even those suffering from gastric or intestinal disorders, experience no trouble after the administration of several consecutive doses of 0.2 Gram (3 grains) each.

Thus, then, we may, without fear, prescribe chlorazene in quite large doses internally, even for subjects having a sensitive digestive tract, yes, even for patients suffering from enteritis, and who so often are sensitive to medicaments.

3. Reciprocal Action of chlorazene and the Digestive Juices.—(a) It is important to study the fate of chlorazene when in contact with the various digestive secretions.

To follow the possible decomposition of chlorazene, with the release of chlorine, we have utilized a very sensitive reaction, one capable of detecting traces of free chlorine. This reagent is composed of

Zinc Chloride	1 Gram
Starch or rice powder.....	1 Gram
Water	100 Grams

This is boiled for fifteen minutes. After cooling, we add 1 Gram of potassium iodide, then strain through fine linen. Traces of free chlorine cause an intense blue coloration, owing to the liberation of iodine, which thereupon reacts with the starch.

A solution of chlorazene slightly decomposed by exposure to the air sometimes gives with this reagent a very slight blue coloration.

With the saliva and a drop of the reagent, chlorazene gives at once, at 37° C., a blue coloration, this disappearing spontaneously at the end of five hours and reappearing after the addition of a fresh drop of the reagent. Upon the addition of a sufficient quantity of the reagent, the coloration persists for more than twenty-four hours. Hence, the saliva decomposes chlorazene by liberating small quantities of chlorine, but, this decomposition is, as a matter of fact, a slow and moderate one.

With pure gastric juice, obtained by means of a test meal, having a total acidity of 1.90 Grams per liter, 0.05 of chlorazene plus a drop of reagent, plus 20 mils (cc.) of the juice, produces instantaneously an intense blue coloration. This coloration disappears spontaneously when there is only a small quantity of the reagent and it reappears upon the addition of new. This forms, apparently, a series of organic compounds that are absorbed by a certain

quantity of the chlorine; hence, the necessity of protecting chlorazene from the intense action of the gastric juice. A similar action is observed with a dilute solution of hydrochloric acid. Furthermore, the gastric juice precipitates chlorazene in aqueous solution. These two reasons make it necessary to protect the chlorazene from the action of the gastric juice while it passes through the stomach.

With the duodenal juice, as obtained by duodenal lavage, rich both in bile and pancreatin, and strongly colored a brilliant green by the bile, the addition of chlorazene quickly produces a green coloration by the oxidation of the bilirubin present. We shall see that, by slowing this action, we obtain the series of intermediate colors characteristic of the Gmelin reaction. This reaction is particularly sensitive for detecting the oxidizing action exercised by chlorazene. With the reaction of the free chlorine, we obtain an immediate intense blue coloration, this changing at the end of two to three minutes to salmon-red.

Hence, chlorazene is decomposed slowly by the different digestive juices. The liberation of a small quantity of free chlorine causes a prolonged oxidizing action, as demonstrated by the oxidation of the biliary pigments.

b. It is important to observe the effect of the chlorazene upon the different digestive ferments. In Mett tubes with ovalbumin or coagulated serum, the pepsin of the gastric juice preserves the same activity as in culture-tubes in the presence of chlorazene in 1:2,000 solution; with chlorazene present in a concentration of 1:1,000, the peptic action is diminished by one-half. It disappears at a concentration of 1:500.

In the pancreatic juice, in the same manner, chlorazene, 1:2,000, does not modify tryptic activity. This is reduced by four-fifths in a solution of 1:1,000 and suppressed at 1:500.

4. *Method of Physical Fixation of the Chlorazene for Slowing Its Absorption.*—The antiseptic, deodorant, and oxidizing action of chlorazene upon the intestinal contents can not be utilized for disinfection of the intestine without finding a process to maintain the chlorazene in prolonged contact with the intestinal contents while preventing its absorption.

We know that, since the days of Boucharde, we have been compelled to utilize

feebly soluble disinfectants as intestinal antiseptics, in order that their action may be prolonged during the time necessary for their dissolution; but, it does not seem easy to engage chlorazene in insoluble combination capable of fulfilling this purpose. Therefore, we have tried by purely physical processes to fix chlorazene with diverse insoluble bodies to retard its liberation and, furthermore, to prolong its effect. We have studied three physical methods of fixation, all of which have given results: the employment (1) of lanolin, (2) of charcoal, and (3) of mucilage (gelose).

1. The employment of *lanolin* was suggested by the well-known property of this substance of binding a large percentage of water. Hence, we have incorporated in a small amount of lanolin the chlorazene or a solution of it, which we wish to use. Subsequently we may give to this mass, if it is a little too soft, the consistency of pills, by the addition of cacao-butter or magnesia. The pills thus prepared have been tested by immersion in water, in the gastric juice, and in the duodenal juice. We have demonstrated that their disintegration and decomposition is very much retarded. The test for chlorine, particularly, does not indicate the presence of free chlorine in the gastric juice before the expiration of a full hour and of an hour and a half in the duodenal juice, instead of instantaneously.

One even may fear that the goal has been passed by and that the chlorazene has become too resistant to solution and decomposition and that in the lanolin it loses in the same degree part of its antiseptic activity.

2. By means of *charcoal* (whose power of absorbing various substances is well known), we have succeeded in securing a fixation that satisfactorily accomplishes the end sought. A powder consisting of a mixture of chlorazene and willow- or black animal-charcoal is inodorous and tasteless, and remains so even after exposure to the air and light for a long time, the charcoal acting probably at the same time as a fixing and reducing agent. In the presence of the gastric and duodenal juice, decomposition, with liberation of small amounts of chlorine, does not occur until after two hours. This decomposition continues for twenty-four hours.

Further decomposition is very slow and very prolonged; consequently, it is utiliz-

able in therapeutics for intestinal disinfection. Furthermore, this form of administering the chlorazene is most readily prepared, since it merely has to be saturated with the charcoal, while this powder may be dispensed in cachets.

3. With *gelose* (mucilage) (the water-binding property of which is well understood, and which swells on absorbing water or aqueous solutions, and which keeps for a long time, even when subjected to trituration and to the movements of the digestive tract), we have accomplished the absorption of strong solutions of chlorazene. It is necessary to reduce this gelose to a fine powder, in order that, when swelling in water, it may retain but a small quantity of the substance the progressive liberation of which is desired.

The procedure that we recommend consists in drying, in the oven at 54° C., gelose impregnated with chlorazene solution. The gelose, when dried, is rendered easy of reduction to a fine powder in a mortar. In this form, it can be used in cachets or in tablet form.

The characteristic of this physical fixation consists in the slowness of the liberation and of decomposition of the chlorazene.

In the gastric juice, the tablets are disintegrated very rapidly. The gelose swells and forms a mucilaginous mass at the bottom of the tube, and is penetrated with difficulty by any fluid. Addition of the chlorine-reagent indicates only a slight liberation of chlorine. Moreover, the blue color is not produced, except on the outside of the mucilaginous mass. Also, the setting free of the chlorine continues for a long time and is renewed every time that the test tube is shaken.

The condition is the same with duodenal juice colored with bile. This in itself serves as an indicator of the oxidizing action of free chlorine. The yellowish-green bile of the duodenal juice, withdrawn directly with a tube, is oxidized only on the surface of the mucilage. It passes through all the color changes, thus indicating oxidation of the biliary pigment; a magnificent Gmelin reaction thus is staged upon the surface of the gelose plug, with its chlorazene—these colors ranging from red and violet to the natural green of the liquid. Sometimes the oxidation is pushed even further, and the following day the bile becomes completely decolorized; how-

ever, this unusual action is produced only by certain specimens of duodenal juice. In short, the mucilage preserves the gelose mixture from the attacks of the digestive juices, the decomposition taking place only on its surface. Incorporation of the chlorazene in the gelose, therefore, presents marked advantages for the purpose aimed at.

Now let us see the therapeutic results obtained with these diverse preparations.

B. Clinical Researches

We have generally used, for intestinal antiseptics, 0.2 Gram (3 grains) of chlorazene within every twenty-four hours, divided into four doses of 0.05 gram (3-4 grain), but we may go much further than this and easily double these doses.

In conformity with the preceding remarks, the chlorazene is given in the following combinations, dispensed in cachets or in tablet form:

1. With animal-charcoal:

Chlorazene	0.05 Gram
Powered animal-charcoal	0.30 Gram

2. With gelose:

Chlorazene	0.05 Gram
Powdered agaragar	0.30 Gram

3. With lanolin:

Chlorazene	0.05 Gram
Lanolin	0.05 Gram
Magnesia	enough

This last formula seems to be the least desirable of the three. Other methods of preparation are still under investigation.

We have employed this remedy in a number of cases where we desired to disinfect and deodorize the stools, as in simple gastric distress, acute enteritis, bacillary dysentery, and affections resulting from the group of typhoid organisms.

1. In certain cases of *gastric disturbance*, often combined with a not clearly determined intestinal infection, but, characterized especially by fetid stools, by profuse diarrhea, coated tongue, and fetid breath of intestinal origin, the administration of 2 to 4 Grams (3 to 6 grains) of chlorazene has promptly produced marked relief, as, first of all, indicated by the deodorized stools. The breath soon loses its fetid character, while the intestinal phenomena, particularly the diarrhea, diminish.

For example, in one of our patients at the Hospital Tenon, who, on the 12th of September, voided eight stools of a very fetid odor, with the corresponding symptom-picture, the ingestion of 0.2 Gram of

chlorazene per day, given in four daily doses, brought about at the end of two days such a modification that the number of stools was reduced to two, being of pasty consistency and without odor. This deodorization was remarkable, in the sense that theretofore the stools filled with stench the little room in which the patient was isolated, and that two days later the stools had completely lost this character. In this patient, on two occasions we have made determinations, by Folin's method, of the urinary conjugate sulphates. These, on September 13, were 0.225 Gram per liter, and, on the 16th, 0.178 Gram.

In a second case, the patient was a physician, under treatment in the Pantheon Center, who had diarrhea, a coated tongue, fetid stools, was in bad general condition, and had an evening-temperature of 39.5° C. After giving him the chlorazene-agar tablets for three days, the symptoms were relieved; the infectious diarrhea had disappeared, the stools were odorless, the temperature had fallen, and the general condition was improved in a corresponding manner.

In a third case, occurring in the military hospital at Tenon, there was present profuse diarrhea, not identified bacteriologically, to the extent of from 10 to 12 very fetid stools every day. After five days of treatment, there were but two, and that nonfetid, stools. The conjugate sulphates had diminished, from 0.274 Gram, to 0.162 Gram, without any modification of the dietary regimen.

We had similar results in a series of summer diarrheas of undetermined origin, in which the antiseptic in question constantly brought about a reduction of the diarrheal conditions and effected deodorization of the discharges, together with immediate improvement in the general condition.

2. In a case of *bacillary dysentery*, in which there were, daily, more than thirty profuse mucous stools mixed with blood, with consequent tissue dehydration, violent abdominal pains, tenesmus, and considerable nervous prostration and a very bad general condition, the administration of the chlorazene mixture brought about, at the end of three days, a reduction to three pasty and only slightly bloody stools. The patient took but two small doses (0.12 Gram). A recurrence occurred after a few days. We then administered chlorazene, both by mouth and by rectal irrigation

tion in agar jelly. Two days later, he had only two soft molded stools.

In another case of dysentery of the Shiga type, with very profuse (twenty-five a day) and very bloody stools, rich in mucus, with very intense abdominal pain and extreme excitement, besides insomnia and a bad general condition, the internal administration of chlorazene, which we still were giving in very small doses, produced a notable reduction of the number of stools, these having lost in a short time their dysenteric character, and having assumed a pasty consistency, then a normal one after nine days of treatment. The general condition was ameliorated very rapidly.

3. By contrast, in several cases of *amebic dysentery*, the administration of chlorazene in gelose by the oral and the rectal routes did not suffice to produce the disappearance of dysenteric stools nor of the amebae in the stools.

4. In several cases of *intestinal toxic-infectious trouble*, with constipation, chlorazene has given equally good results. We will cite, as an example, the case of an old victim of amebic infection, attacked by postdysenteric enteritis, together with constipation and auto intoxication. The evening temperature oscillated between 38 and 38.5° C. After September 13, there were observed a coated tongue, loss of appetite, and a bad general condition. October 4, we gave 0.25 Gram of chlorazene. After that, the evening temperature did not go beyond 37.3° C.; it was only 37.1° C. the next day, and 36.9° C. the day following. Since then, the improvement has continued.

5. In a case of *paratyphoid fever, type B*, with constipation, methodical disinfection of the intestine with chlorazene produced, in three days, a notable lowering of the temperature, but, which, after several days, mounted again when we stopped giving the medicament. The result was good and the attack was shortened; still, it would be foolish to conclude from this single case that our treatment would cause a modification of the progress of typhoid infections.

6. We have used chlorazene as an intestinal disinfectant in two cases of *catarrhal icterus*, with complete decoloration of the discharges and very fetid stools, such as are habitual in these cases. In these two cases, deodorization of the stools was very rapid from the first, and they lost their

fetid character, although the diet was not changed; however, the duration of the icterus did not appear to be modified.

7. In a certain number of cases of *chronic enterocolitis* of various character, either with diarrhea or with constipation, the administration of chlorazene has not seemed to modify much the clinical picture. Nevertheless, the medicament has been well tolerated, and no painful cramps have occurred, despite the hypersensitiveness of the intestine in this condition. In certain forms of chronic infectious enteritis, the problem still remains under investigation.

Conclusion

To sum up: Chlorazene is a nontoxic substance, well tolerated by the intestine, is decomposed but slowly in the digestive canal when the drug is incorporated with

various absorbent bodies, and has remarkable bactericidal, oxidizing, and deodorant properties. We have given such mixtures, with conclusive clinical results, in a series of intestinal troubles characterized by the predominance of toxic-infectious symptoms and by fetid stools.

This study, it appears, should be followed up in numerous cases in which it is of value to have at command a serviceable intestinal antiseptic, and, without deceiving ourselves further with the chimerical hope of rendering the intestine antiseptic. But, the diminution of the microbial processes in the intestine and of the fetor of the stools and the amelioration of the general troubles consequent thereupon already is an important therapeutic result of the employment of chlorazene as here recommended.

After Thirty Years—X

Notes and Reflections on Life and Work

By WILLIAM RITTENHOUSE, M. D., Chicago, Illinois

(Continued from January issue, page 29)

A Constipation-Clinic

SOME time ago, a colleague said to me: "I am at my wits' end. I have a patient afflicted with chronic constipation, and the case has floored me. Despite all that I have been able to do for him, he is gradually getting worse and I am beginning to fear serious results. He has got to the point where an enema will not always empty the rectum, and every few days he has to resort to mechanical evacuation with the finger. This leaves him utterly exhausted and the parts inflamed and painful. The trouble is aggravated by the fact that he has to take a little morphine for chronic bronchitis. I should like to bring him to you for a consultation."

So, the patient was brought to my office for a thorough investigation. I found him to be a man of 55, sparely built, and of sedentary occupation. His trouble had been coming on gradually for four or five years. After a thorough examination, I summed up his condition as follows:

- His bowels would not move without his using a large amount of water from a fountain-syringe. He had tried several systems of so-called "internal bathing", as

advertised in the newspapers, the result being that he had overdistended the rectum, thus destroying its tone and dulling its sensibility so completely that now very often even a large enema would fail to empty it and he was obliged to aid with the finger.

- The anal sphincter was so tight that the index-finger could be passed only with difficulty, and there were a number of little fissures or tears in the mucous membrane that were inflamed and painful.

- He had abused cathartics of every kind, until they almost refused to act.

- He was not drinking enough water.
- He was not eating suitable food.

- He was in the habit of not going to stool unless he felt the call, consequently, sometimes going four or five days without an evacuation, which, naturally, resulted in an impacted rectum.

Then I gave the man a little talk, in substance, as follows:

A Heart-to-Heart Talk to a Patient

"You are the victim of a lot of bad habits. In the first place, bad habits of your own, which eventually have caused bad habits in your bowels. For, constipation is simply a set of wrong habits on the

part of the intestinal canal. The only hope for a cure for you lies in your trying to bring about correct habits in your bowel, by yourself establishing correct habits. Almost any problem can be solved, if adequate means are employed. You have used a great many means, and some very drastic ones, but, you have not used them rightly, and, consequently, they have not been adequate to attain the desired result. You must cut out all efforts at self-cure, based either upon advertisements or the advice of friends, and put yourself unreservedly into the hands of your doctor. If you had pneumonia, you would not think of trying to manage your own case, because you would realize that the problem was too hard for you. Well, you have just as hard a problem on your hands now. You can cooperate better with your doctor if you understand the conditions that lie at the bottom of your trouble.

"In the first place, your rectum ought to be an elastic muscular tube one and one-half inches in diameter, and so sensitive that as soon as fecal matter descends into it you would feel a sense of discomfort—a call to empty it. Instead of this, you have overstretched your rectum with large injections of water and with large accumulations of fecal matter until it no longer is a snug elastic tube, but, a huge flabby pouch four or five inches in diameter, and capable of filling the pelvis. This overstretching has destroyed its sensibility so that, when fecal matter descends, you do not feel its presence. Its contractile power also is weakened, so that now there is little expulsive force.

"Another harm done by the water is, that your rectum and colon are dry. It is a well-known fact that the presence of water stops the natural secretion from the mucous membrane. For example, if you are eating a dry biscuit, the salivary glands pour out an abundance of saliva, to moisten the food and lubricate it for being swallowed easily. But, wash it down with a swallow of water, and note what happens. At the next mouthful of the biscuit, the saliva will not flow. The salivary glands were inhibited by the water, and, for the time being, they cease to act. The colon and rectum behave in a similar manner. In normal conditions, the lining of the bowel secretes a mucus that keeps the stools soft, lubricates them and makes

their passage easy. But, flood the bowel with water every day, and, this secretion of mucus stops and severe constipation is the result.

"Now, nature's power of recovery is so great that, if you stop overstretching the rectum, it will gradually resume its natural tonicity and contract down to the normal size. If you keep it empty, it will gradually recover its natural sensibility, so that you will feel the impulse to go to stool whenever fecal matter descends into it; and, if you stop flooding the rectum and colon with water, they will in time resume their natural secretion of mucus. Without strict attention to these three points, you can not hope to be cured. However, all this will take time, and in the meantime you will need the doctor's help to guide you while you are bringing back normal conditions. You must drink more water, not alone now, but, every day for the rest of your life. You must avoid constipating foods and eat those that have a laxative tendency, especially fruits and vegetables, and, in determining your diet, get your advice from your doctor, instead of from the newspapers. Some of the advice given by the latter is good, some of it is bad. For example, most of them advise the eating of bran. Now, bran with most persons, will at first relieve constipation, and, with a few, may, perhaps always, produce that effect; but, there are many individuals with whom it soon loses that effect and, if persistently used, it will bring about a very obstinate form of constipation. The rough bran acts as a mechanical irritant to the intestinal mucous membrane, and at first this produces decided activity; but, after a time the membrane refuses to respond and, like the overtired horse, pays no attention to whip or spur. I have seen some very obstinate cases of constipation in bran-bread-enthusiasts.

"You will have to use laxative medicines for a certain time; however, this will call for the greatest care and judgment, otherwise, you will get harm from them, instead of good. That was the trouble with you in the past. You abused these aids for want of proper instruction. In this matter, above all, you must be guided by your physician.

That Spastic Sphincter.

"Then there is that tight sphincter. As long as that remains in its present condi-

tion, you will not succeed in overcoming your constipation. It is absurd to expect a hard, dry bolus of fecal matter two inches thick to pass through a sphincter that hardly will admit the index-finger. You can have that sphincter stretched under anesthesia or you can get a set of rectal dilators and learn to use them. I think the latter the better plan, for, then you have your future in your own hands, while the dilatation under anesthesia may be a failure. If, under the latter, the muscle is not stretched thoroughly enough, it soon becomes as tight again as ever; while, if overdone, fecal incontinence may result. It is true, the dilators may have to be introduced at intervals for the rest of your life; but, then, considering the eminently satisfactory result, this constitutes no real hardship. After dilating the sphincter properly, the good effect may last anywhere from three months to three years, according to the size and strength of the muscle.

"For a while, at least, you must go to stool three times a day or oftener, whether you feel the impulse or not, so as to make sure that the rectum is kept empty. A good time to go is about an hour (or less) after each meal. The eating of a meal starts up peristalsis in the bowels, and, by going regularly at this time, a correct habit will gradually be formed. Of course, you will not bring on defecation each time, still, you are giving the opportunity—which is the great point. Another help is, to drink a glass of cool (not cold) water about ten minutes before going to the closet. This is a valuable aid to most people. While the injecting of water into the colon stops the secretions, taking the water into the stomach does not have that effect. Rather, it seems to stimulate for a short time peristalsis as well as secretion. The effect is analogous to the profuse outpouring of perspiration so often observed after one's taking a drink of water on a hot day in summer. Then, aside from the immediate effect, it is very important, for overcoming constipation, to keep the body-fluids well diluted by drinking four or five glasses of water every twenty-four hours. It is better to supply one's self with some good spring-water. The cost is small and the satisfaction great. The city-water often is impure, and the chlorine at present added to it by the health-authorities is in-

jurious to some people. I have ample proof of this in my own person, as well as in the case of many of my patients. A pure spring-water, such as that of some of the Waukesha springs, is better than distilled water and much better than mineralized water."

As I finished, the patient remarked: "I recognize the force of all that you have said, but, I should like to have it in some permanent form for my future guidance. Can not you write it out for me to keep?" He was assured that this would be done.

He then continued: "There is one thing more about which I am not clear. You say that I must not take large enemas nor use the finger to empty the rectum when it becomes blocked. I can see the importance of this, yet, what am I to do?"

I answered, "Provide yourself with a piston-syringe (not a bag-syringe) holding about 2 ounces, and also a set of 4 rectal dilators. Inject into the rectum 1 ounce of plain warm water. This is not enough to do any harm by the distention. Hold it one hour, to soak and soften the mass in the rectum. While thus waiting, lie down on your left side and introduce the dilator. Select one about 3-4 of an inch in diameter, lubricate it well with vaseline, and introduce it into the rectum by slow (*very slow*) and steady pressure. The object is, to tire out the muscular fibers of the anal sphincter without producing little tears in the mucous membrane. Make this your rule: If it begins to hurt, you are pushing too fast; you are tearing the mucous membrane, and you will pay the penalty in pain and soreness for some two days. Keep up steady pressure just short of actual pain. If your arm does not become tired out, keep this up till the end of the hour. If the dilator passes through the sphincter, let it remain in place till the end of the hour. Then remove or expel it and go to stool. You now may empty the rectum completely, or perhaps only partly so, if the feces are very hard. In that case, inject another ounce of water and again lie down for another hour, after which you will surely succeed."

"Now, to prevent a recurrence of such an accumulation, you must faithfully carry out the following rules: (1) Take enough laxatives to keep the discharges soft. (2) Keep the rectum empty. (3) Keep the sphincter dilated to a normal size. (4)

Eat suitable food. (5) Drink plenty of water.

"As for the laxatives, you will need your doctor's guidance. He will give you about four different kinds, so that you will not take any one of them so often as to get used to it and have it lose its effect. As stated before, go to the closet three times a day about one hour after each meal—oftener, if you feel the inclination. Take one of the laxatives just after going to stool in the morning. That should act inside of twenty-four hours. If it does not, take a large dose of one of the others. If an action is had, take the laxative only every other day, and, later, every third day, continually changing from one kind to the other. The dilator should be introduced every day, until it passes easily, and then at gradually lengthening intervals. If it leaves the parts painful, you have employed too much force. Then give the anus a rest for a few days."

The Medicinal Course

The four laxatives we selected for this patient were:

(1.) Phenolphthalein, 2 to 5 grains. (2) Waugh's anticonstipation granules. (3) The old standard A. B. S. and I. (4) The old Hinkle's formula. The latter three are quite similar, merely varying the proportions of the main ingredients, while Waugh's formula contains, in addition, emetin and bilein.

We began with 5 grains of phenolphtha-

lein, with a glass of water, at 11 o'clock in the forenoon. Twenty-four hours later, there had been no action, so, we gave 8 of Waugh's granules. About two hours later, just after the noon meal, there was a moderate action from the phenolphthalein, and that evening at bedtime a very brisk and thorough action from the granules. As the evacuation had been so thorough, no laxative was given the next two days. Then a dose of No. 3, and, two days later, a dose of No. 4. After about three weeks of using one of the four laxatives every other day, we gave them only every third day, and sometimes the patient could go for even five or six days, having a natural action every day. Whenever he failed to have an action by 10 o'clock in the forenoon, he took a dose.

In three months, this man practically was cured; that is, to say, he took a laxative only at intervals of ten or fifteen days. His rectum had recovered its normal sensibility and tonicity, while the sphincter admitted a 1-inch dilator with ease. Of the four prescriptions, it was found that phenolphthalein and Waugh's granules gave the best results. The last time I saw him, he said to me: "No one that has not been through it can appreciate what a nightmare I have been freed from in getting cured of my constipation. I have taken a new hold upon life."

2920 Warren Ave.

[*To be continued.*]



The Treatment of Chronic Diseases

Diseases of the Nervous System

By GEORGE F. BUTLER, M. D., Wilmette, Illinois

Medical Director, The North Shore Health Resort, Winnetka, Illinois.

(Continued from January issue, page 42)

Principles and Advice in Treating Neurasthenia

The General Principles of treatment consist in educating the patient to live within his nerve-energy income—which is exceedingly small. The man of average strength can not, with impunity, attempt to perform the muscular feats of an athlete or prize-fighter. Likewise, the neurasthenic can not do what many of his acquaintances do. He must forego a great many pleasures; must abstain from many pastimes and entertainments; refrain from many articles of food that to him seem simple, natural, and wholesome, but, nevertheless, stand in the way of his recovery. He must, above all, learn his limits.

His treatment must be a sort of education, teaching him to be patient and temperate in all things. He must learn to adapt himself to his surroundings, to re-establish the lost normal equilibrium between himself, as an individual, and his environment. To mitigate, if not, to prevent a collapse, which constitutes such a discouraging feature in the course and progress of neurasthenia, discouraging alike to patient and the family. To achieve this, the patient must be taught to avoid extremes, especially of emotion, and also of work, mental or physical; in fact, bodily and mental hygiene adapted to his individuality must be instituted. No rest-cure, no seaside, no gymnastics, no cold or warm water, in fact, no one particular method is equally applicable to all the victims. And drugs alone will not bring about restoration to health.

Some Specific Advice.—There are certain remedies, however, that will be found of great value in many cases of neurasthenia.

Knowing, as we do, that there always is present autotoxemia in these cases, it follows that free elimination, through all emunctories, especially the bowels and kidneys, is necessary. Hydrotherapy and balneotherapy, as already indicated, favor

elimination through the skin and kidneys. However, the bowels should be kept active, and that by remedies that do not, by their secondary action, tend to constipate or to disturb the stomach. I have found some simple laxative saline, such as sodium phosphate, rochelle salt or, what has proved of special value in many patients of mine, an effervescent saline laxative, as a rule to act best in connection with intestinal antiseptics. As a general tonic in convalescence, arsenic; while, if the condition is one of sexual neurasthenia, the three arsenates of strychnine, quinine, and iron, with nuclein will prove of great value.

However, during the entire course of the treatment, the patient should be under the control of a physician and during treatment should be severed from the environment in which the disorder has grown up. He should receive dietary, hydrotherapeutic, balneotherapeutic, and drug treatment only as indicated in his particular case. The great results formerly attained at watering-places were due to the partial application of these principles and to the medical control exercised.

No rest-cure is properly carried out where the principles indicated are neglected. Rest-cure places under lay control, whether of trained nurses or otherwise, are simply quackish lounging-places. That the training of a widely advertised system of rest-cure is eminently deficient, is shown by the fact that nurses trained under that system never detected the untoward action of drugs used in treatment until decades after their existence had been pointed out by neurologists.

A Summary

In summarizing the ideas expressed above, remember that the neurasthenic is born, not made. He is, from his mother's womb, a physical and mental "unfit," a shiftless potterer in nerves, just as some men are in business. The stresses and strains of modern life do not make neurasthenics; they show them up. Neither do I take any stock in the doctrine that neurast-

thenia is the result of autotoxemia, except in the sense of part of a vicious circle. Autotoxemia from retained waste products is, primarily, a result, and not a cause, of neurasthenia, owing to faulty innervation of metabolism and elimination. So with indigestion, insomnia, and all the other train of symptoms. In short, neurasthenia is not a condition of the nerves at all, but, of the whole body-economy. Given a certain stewardship, represented by the whole body-mechanism, and the neurasthenic is inherently incapable of running it at a profit, just as a business ne'er-do-well, given a certain capital of money and opportunity, muddles and fritters it away.

This being so, the two prevailing principles of treatment are both equally irrational and fallacious, namely, that of direct nerve sedation and that of direct nerve stimulation, represented, respectively, by the use of bromides and strychnine. If the nerve-tissue and its functional capacity are below par, then it can not be rational therapy to depress and stultify them still further with a combination of two such depressant and toxic drugs as potassium and bromine. If, on the other hand, the irritation-symptoms of neurasthenia be the expression of a deficient nerve-system working against odds, then to whip it into still further frantic effort with strychnine is the worst kind of therapeutic folly.

The truth is, the neurasthenic requires neither sedation nor stimulation, at least not of a direct or forcible nature. The business ne'er-do-well is not helped either by petting or by putting money and opportunity into his hand. What he needs is, a guardian, a manager, to manage his affairs so that he may be kept reasonably free from debt and muddle. So the nervous ne'er-do-well needs, not sedatives or stimulants, but, a careful regulation of all his body-economies in such a fashion that his modest nervous income will be expended to the best possible advantage and with a minimum of friction.

How shall this be done? There is no cut and dried method, no hard and fast rule. Each case is a law unto itself. And it is characteristic of these patients, as it is of all types of shiftless persons, that they do not exhibit their shiftlessness in the same direction two days consecutively. For several days at a time, they often display a temporary efficiency in utilizing and

managing one or two departments of their economy and do finely in this direction, then, like the business-incompetent, they give up the effort, only to renew it in the same fitful way in other directions.

Hence, the intelligent therapy of this condition demands periodic supervision, changing treatment from time to time as the shifting phases of the patient may require, and always on the principles that apply to the helping of ne'er-do-wells. One of these principles is, not to help them more than is absolutely necessary, but, rather, to let them help themselves as much as possible. Another is, that, when help is needed, it should be given in small, frequently repeated, judiciously placed doses rather than in large quantities. To the capable, energetic business man, temporarily pressed, it is all right to give large sums of money or other heroic form of aid. But, for the constant potterer, such a course manifestly is worse than to let him alone.

The Rational Therapy of Neurasthenia

Translated into actual therapeutic terms, then, the rational treatment of the neurasthenic is, briefly, to regulate, by whatever means seem most appropriate (preferably not drugs), whatever phase of his or her disordered and mismanaged body-economy needs help at a given moment. It may, possibly, happen that, in carrying out this plan of treatment, the slight and temporary use of such drugs as strychnine and bromides may occasionally be called for; but, their routine or cumulative administration never is required in neurasthenia.

The remedies which here are most frequently indicated are, the laxative salines and the gastrointestinal cleansers, such as sulphur and phenolphthalein; the metabolic alteratives and eliminants, such as arsenic and colchicum; and the tissue nutrients, such as nuclein and lecithin.

The mental element is the one that looms largest in the condition of the neurasthenic, so that the moral treatment is correspondingly important. In mild cases, he needs nothing more than the enjoyment of good hygienic habits and the assurance that nothing serious ails him; and he may be allowed to follow—indeed, he had better do so—his customary employment. If he has no employment, the sooner he finds one the better. In severer cases, where the mental perturbation and depression is a very serious matter, it is better that he

should drop his accustomed work for a time and go away from home, among congenial people who are comparative strangers, where he can not air or nurse his obsessions. It is, however, a mistake, I think, to send these patients away into surroundings that are so completely the opposite of those to which they have been used as to pall upon them, as, for example, to send a city man into extremely rural environment, for, however wholesome this course may be for the body, it is liable to have upon the mind just the reverse effect from that which we are seeking, and make him brooding and mopy.

What the average neurasthenic patient needs most is, play—but, it must be play of a kind that is congenial and engrossing to him. For this reason, clergymen and schoolteachers, who suffer most from neurasthenia, are the hardest patients to cure, because they are estopped by their religious and social prejudices and principles from indulging in just the form of fun that would relieve them and for which their human minds really crave. I have seen many a neurasthenic minister and teacher whom a good game of cards or a seat at the comedy two or three nights a week for a few months would have cured, but, who could not be persuaded to follow this advice.

Neurasthenics always drink too little water, and usually have to be forced to take a sufficient quantity of it. Generally, they can best be induced to do so by prescribing some brand of mineral water to be taken so many times a day. The psychic influence of this order will, as a rule, produce the desired result.

The insomnia of neurasthenia should not be met by giving narcotics; for, these patients furnish the readiest subjects of habit-formation. As a rule, they can induce sleep by the simple expedient of tak-

ing a little hot milk or rum punch before retiring; then, when once the spell is well broken, they will go to sleep without any such aid.

Hydrotherapy is an excellent agent in the treatment of neurasthenics and should never be neglected. There is hardly a phase of hydrotherapy that is not applicable and useful, from the hot-pack to the shower-bath. Nor should it be limited to the sporadic dallying methods of "home treatment", but, carried out in a systematic, orderly fashion. It is my practice to insist that these patients submit themselves to the régime of some good sanitarium or, if that be not available, of some reputable bath-establishment where adequate equipment and skilled attendants render the procedure scientific and efficacious. It is not necessary that they go into residence at such an institution; but, they should go regularly and receive treatment, either under the supervision of the medical director, if it be a sanitarium, or, if it be a bath-house, under the direction of the physician in care of the case. Hot baths and packs, mud-baths, to promote elimination; with rubs to stimulate the activity of the skin and general circulation; shower-baths and needle-baths as a still more lively tonic; these and other procedures are all of the highest value in the treatment of this condition.

Closely associated with hydrotherapy is electrotherapy, which should be administered in connection with the former. Of electrical measures, galvanization of the muscles, faradization of the skin, and high-frequency condensation are the most useful. Most of these treatments are best carried out at night, after which the patient may be allowed to walk home briskly, when, as a rule, he will put in a night of quiet, restful, healthful sleep.

[*To be continued.*]



Life and Psychophysiology

By E. S. HASWELL, M. D., Albany, New York

THE problem of what is life is one over which opposing schools of philosophers have fought for ages. Only an ignoramus would say that he had solved it, while the philosopher does not believe that its solution lies wholly within the realm of the possibilities of metaphysics. A discussion of this question presupposes a knowledge of physical and of biological facts; also an acquaintance with, if not a belief in, Darwin's theory of the origin of the species—which theory has been proven to the satisfaction of biologists.

Not entering too deeply into the subject of matter, it may be stated that matter is that which is—not that which was nor that that will be, but, that which exists. Life is an attribute of every and all forms of matter.

Life is the phenomenon or the manifestation of the autoconvertibility of latent, or potential energy, into kinetic energy both in animate and inanimate matter.

As the atom is the unit of chemical affinity and the molecule is the unit of that physical attraction of masses which in cosmic bodies becomes gravitation, so is the cell the unit of animate masses or entities, the life of which is the sum total of the life of its individual constituent cells.

This cell primarily depends upon chemical affinity, which unites atoms into molecules, and, secondly, upon cohesion and adhesion, which actions combine molecules into masses. Smaller masses unite with larger ones, *ad infinitum*; thus ultimately producing the various cosmic units in which attraction becomes the force of gravity. The gravity of each, exerted upon all others, maintains all bodies in their relative positions in the universe; thus demonstrating a state of mutual dependence, in which the power of each is used for the welfare of the whole, or, a cosmic democracy.

The Evolution of the Animal-World

The elements essential for cellular life are oxygen, sulphur, nitrogen, chlorine, phosphorus, carbon, hydrogen, iron, magnesium, calcium, sodium, and potassium, the atoms of which combine to form highly complex molecules of a gelatinous

or colloidal substance, called protoplasm, and constituting an electrolytic compound. These elements are named in order as they occur in the electrochemical series: that is to say, each is electropositive to those preceding and electronegative to those succeeding it. Cells are miniature electric batteries, which, under proper conditions, discharge their energy. When stimulated, cells convert their potential into kinetic energy. Muscular contractions, heart beats, and the like, are attended by a discharge of electrical energy—a fact which, although their discharge is immeasurably small, nevertheless, has been demonstrated.

The cells are the units of animal-matter. Their location and function determine their arrangement, morphology, and physiology. Each organ is composed of a collection or group of cells harmoniously performing the same work in what may be termed a cellular community or democracy: each cell serving the interest of its fellows and all organs working for the benefit of the entire body, or the great cellular commonwealth.

Those collections of molecules composing small masses of matter, the sum total of which constitute our soil, are divided into inorganic and organic chemical compounds. From this soil, the plants derive their nutrition. By the processes of absorption, assimilation, and synthetic chemistry, the plant constructs a highly organized animate entity, which is composed of the same elements as the soil on which it grows. Its proteids, carbohydrates, fats, and mineral constituents are merely the products of the progressively constructive metamorphosis that takes place in the rearrangement of atoms and molecules in their transformation from soil matter and energy into plant-cell protoplasm.

Vegetable life is the interlink or transitional stage between the soil and the highly complex and organized entities of animal matter. The animal-kingdom depends for its life directly or indirectly upon the vegetable kingdom. Herbivorous animals depend directly upon the plant for nutrition, while the car-

nivorous animals feed upon the herbivorous ones. The animal-economy is dependent for its sustenance and energy upon the ingestion and absorption of vegetables or their products. So, vegetable matter is transformed, by the animal digestive apparatus and synthetic chemistry, into cells, tissues, and energy of animal-life. In this state, matter has reached its highest degree of perfection and efficiency.

Daily the animal organism, by reason of its processes of waste and repair, excretes the end-products of the disintegration, as caused by kinetic energy upon tissue-substances and cellular compounds. These excretory substances undergo a further breaking up, ultimately resuming their original inorganic, or inanimate, state, or condition.

When, by reason of impaired nutritive processes or altered chemical forms, the animal-economy reaches that stage in which it no longer is able to convert its potential energy into kinetic energy, the body, as a whole, becomes an inert mass of matter, or, now is in that condition commonly termed dead, following which it decays and disintegrates into its original and less complex chemical compounds—a literal return to dust, when it again nourishes the plants and then, through them, the animals. And this cycle is endlessly repeated, for as long as environmental condition remains favorable.

Life a Democratic Process

Thus we see that life is a democratic process; that all forms of matter are composed of a greater or less number of elements or combinations of elements. All possess the universal properties of matter, which are: compressibility, divisibility, elasticity, expansibility, extension, indestructibility, inertia, impenetrability, mobility, porosity, weight, together with the characteristic properties of the special forms of matter, which vary according to their state of being and function. All forms possess affinity, attraction, and energy. All matter, therefore, possesses life, in a broad sense, while, in a narrow sense, the term "life" is limited to the vegetable and animal states—these designating mass-entities that manifest specialized forms of energy. It is not too much to affirm that socalled inanimate matter is inanimate only from an arbitrary point of view. The soil can not impart vital principles to

a plant, if it does not already possess them, itself.

The proof, that animate principles are present in socalled inanimate compounds, is readily found in the reaction taking place between solutions of sodium chloride and silver nitrate when brought into contact. There is, at once, disintegration of each into its component atoms and, by reason of their intense chemical affinity, two different chemical compounds are formed immediately—one, sodium nitrate, and the other, silver chloride. The newly formed compound, silver chloride, is produced by reason of the great affinity of silver for chlorine, while, simultaneously, the reaction is accompanied by the manifestation of energy. This new compound possesses its own physical and chemical characteristics. There has been neither destruction nor production of matter; the sum total of the contents of the test tube, of the chemical elements remaining the same as before.

Is not this the manifestation of the two fundamental principles of life—energy and the affinity of opposites uniting to produce but, not, to create? In this experiment, the reaction is not unlike that of the positive and negative factors of human life, where, when the affinity between mates is not sufficiently strong, they divorce themselves and seek new combinations of mates between whom there is a greater affinity.

Life depends upon chemical activity and affinity and is that form of energy manifested by the process termed biological chemistry. It is a product of the democratic law of matter, that all things operate for the common welfare.

Physiological Psychology and the Physician

The highest form of the manifestation of life is that physiological process known as human thought, with its resultant actions. Thought is the phenomenon of the physiological activity of the nerve-cells of the intellectual centers of the brain. Thought is that form of human energy that institutes, controls, and directs man's various activities.

For a proper understanding of human nature; that is, of man's ideas, thoughts, emotions, passions, vices, virtues, and desires, and the various mental qualities by which the individual is characterized, a knowledge of the principles of evolution and anthropology would be of considerable value to the physician; but, a thorough comprehension of normal psychology is

very important and essential and should be incorporated in that part of the medical curriculum dealing with the psychoses.

As students of human anatomy and physiology, physicians are well aware of the commanding influence that is possessed and maintained by the physiological activity of the brain in ruling and governing the human body. Our present knowledge of the anatomy, physiology, and diseases of the brain and nervous system has explained so much of human activity that heretofore was believed to be beyond the knowledge of man that we should not hesitate to plunge boldly and delve deeply into that most-important, yet, least understood, of all branches of physiology, namely, that of psychophysiology.

More and more, as each year passes, the importance of the psychic element has come to be realized in the treatment and not infrequently in the diagnosis of many diseases, especially those of neuropathic and psychopathic origin. This brings us to a brief consideration of that mental process termed consciousness.

Soul, Mind, Consciousness, Thought

Normal consciousness is that physiologic function of the brain whereby, through the senses, it has perception of external matter and its universal and characteristic properties and whereby, further, it reacts to these sensorial impressions and resulting motorial expressions, besides being cognizant of the existence of that body in which it is located.

The mind, of which consciousness and thought are manifestations, has long been considered the interlink which binds an immaterial soul to a material body. The *brain* is the *organ of consciousness*, of thought, and of reason, not the seat of their phenomena.

Complete consciousness depends upon the sum total of the various sensory impressions and their numerous associated memories, which are collected by the association-tracts or fibers. The impairment of receptivity to impressions, of sensory and memory-centers, lowers by just so much the degree of consciousness.

Cerebral localization teaches that there are definite memory-centers for olfactory, auditory, visual, and various other sensory impressions and of motorial expressions. Discussion is unnecessary, except that it may be stated that disease—destructive inflammatory processes, neoplasms, et cetera,

—of any one of these areas impairs or destroys the particular function of the area involved. A lesion of the superior left temporal convolution causes word-deafness, and the patient, because of inability to receive word-impressions, becomes nonperceptive to the sound-waves of spoken language. Lesions of the occipital lobe cause partial or total blindness, thereby impairing or destroying as much of the patient's consciousness as depends upon visual sensory impressions.

The condition of "mind-blindness," in which the patient sees all objects, but, is unable to recall or register the visual image, is a striking example of impairment of consciousness.

Thus a *material basis for consciousness* is established. The effect of certain drugs in altering consciousness, producing hallucinations or causing unconsciousness by direct or indirect action upon brain-cells is a well-known fact.

Thought a Form of Energy

Thought, being a phenomenon of cerebral activity, is, therefore, a form of energy. *No form of voluntary motor expression occurs in which the muscle-cells do not receive a stimulus from an impulse sent out by the motor-area of the brain.*

The potential energy of the cell, through its neurons and motorial end-plates, is converted into the kinetic energy of muscular action. But, it will be contended that there is not enough potential energy in the cells of the motor-area to lift a heavy weight. True! However, it also is true that the potential energy of a dry-cell battery will not move a mountain; still, the spark from it, properly applied to a high explosive, will move several tons of stone or drive an internal-combustion engine.

As these material changes impair consciousness and the particular function of the area affected by them, by just so much are the reasoning faculties of the patient reduced. Therefore, if it is essential that a thorough and adequate knowledge of cerebral localization is necessary for a proper understanding of these material changes that affect the brain, how much more essential, then, must be a knowledge of the physiology of thought and reason—that is to say, of psychophysiology in its more limited sense—to a proper understanding of the condition of the patient's mind in disease, whether or not that dis-

case be a primary phychosis or secondary to a physical condition.

Many men, through their lack of knowledge of psychology, attribute much of their patient's mental condition to whimsicalness, perverted and distorted imagination, and even to downright crankiness, when, if they could analyze their patients' psychic condition, they would discover some mental flaw, error of reasoning or defect of consciousness; that is to say, a reaction to external stimuli, which, when corrected, would greatly alleviate and, many times cure the mental condition.

Wherein Doctors Failed

Medical dogmatism has been almost, if not quite, as fatal at times to the advancement of the profession as religious dogmatism has been to the advancement of general science. If the profession had learned earlier to recognize that class of patients needing mental suggestion and had intelligently applied psychotherapy, there would have been no excuse for the organization and perpetuation of the Christian-Science cult. Had the profession given earlier attention to the study of scientific massage, there would have been no occasion for the school of Osteopathy. There were and are those patients who need psychotherapy, and those who need scientifically applied massage. If the profession had recognized those groups of cases that could be cured only by means of these methods of procedure and had intelligently applied the indicated form of treatment, then the supply of that type of treatment would not have originated from external sources.

So, it behoves the profession not to look with too much incredulity and bigotry upon the well-meaning efforts of those who are introducing psychoanalysis and psycho-

therapy as methods of medical procedure. Too long, indeed, has psychophysiology been considered the special property of the socalled psychologist. Too long, indeed, has it been subjected to the malignant influence of a spiritualistic mysticism and a religious fanaticism that have built around it so many hypotheses, and which it is deemed sacrilegious to question and heresy to deny.

The condition of psychology at the present time is a paradox, for, it is at once pathetic and ludicrous. Psychopathology is granted to the domain of medicine and to the province of the psychiatrist, but, psychophysiology, or the study of the higher normal psychic activity, is, apparently, not considered as a department of human physiology.

It is true that the greatest advances in physiology are made by comparing the normal with those changes of functions and activities that are manifested in the abnormal state.

If psychophysiology is to be considered as the study of an immaterial self, then, why should psychopathology be considered the proper subject for medical investigation? Either psychophysiology should receive careful study by the medical student prior to his course in insanity, and it should be treated as a branch of physiology proper, or, the medical profession should renounce all right to treat the psychoses and consider them merely the diseased condition of an immortal and immaterial soul and give them over to the theologian for diagnosis and treatment. In other words:

When the body functionates normally (health), then it is the "soul," while, when it functionates abnormally, (disease) then it is the "brain" that is the putative basic factor.



What Others are Doing

NEW TREATMENT FOR VINCENT'S ANGINA

One of the most troublesome forms of sore throat is the ulceromembranous type, characterized by a grayish, putrid false membrane and more or less deep ulceration, and which goes under the name of Vincent's angina. In this form of sore throat, extremely fetid breath, increased salivation, painful deglutition, and glandular swelling are present; also much pain upon pressure, elevation of temperature, and a general infectious appearance.

Lagarde in *Paris Médical* for October 12, 1918 (p. 289), says that various antisepsics were tried by him in a series of cases of this form of sore-throat, but, generally, with poor results. Among them, were: methylene-blue, Labarraque's solution, and arsenobenzol in powder. As a rule, improvement was very slow, until he began the use of Dakin's solution, which was applied by means of frequent irrigations and as a gargle. The results obtained with this antiseptic were very striking. He was surprised to observe, even after the first lavage or gargling, the almost instantaneous disappearance of the general phenomena, the arrest of the necrotic process, and extremely rapid cicatrization of the lesions.

One case is described in detail, as typical of the others, this patient being a soldier, 26 years old, in whom, despite the use of methylene-blue and other classical applications, the condition not only persisted, but, became more severe. He then began to irrigate with Dakin's solution twice a day, using a liter at a time. In the intervals, the patient gargled his throat with the same solution. From the very first lavage, improvement took place. The ulcerations began to heal up, the necrotic material disappeared, and the natural rose-color of the tissues again made its appearance.

The author concludes that, on account of its detergative action, its powerful bactericidal action, and its effect upon phagocytosis, Dakin's solution is superior to other

remedies in the treatment of Vincent's angina. Six subjects were treated with this remedy, with most satisfactory results.

AN "ABORTIVE" TREATMENT FOR INFLUENZA

Many "specifics" have been suggested for the treatment of influenza and its complications. Thus W. F. Burrows and E. C. Burrows, writing in *The Medical Record* for December 21, 1918 (p. 1081), strongly recommend the intravenous administration of quinine dihydrochloride. The indications for its use, as given, are as follows:

1. When the disease shows no retrogression after three or five days; (2) when the temperature climbs and remains more constantly high; (3) when the pulse, previously slow, exceeds 100; (4) when the cough increases; (5) when rusty sputum or physical signs of definite pneumonic consolidation occur.

It is stated that quinine dihydrochloride is used by the authors in a 3- to 10-percent solution, except for the young, in whose case, it may be given intramuscularly, in doses of 1 1-2 grains for each year of age. Intravenously, from 7 to 20 grains of the alkaloid is injected at a dose. In one instance, as much as 22 1-2 grains was given at one injection, the patient having a temperature of 104° F., a pulse of from 90 to 105, respiration numbering 26, associated with the characteristic symptoms of influenza.

The intravenous injection was followed by a temperature drop, in two hours, to 101.5 degrees, resembling that occurring in the crisis of lobar pneumonia. It continued to fall and did not rise again above 100.5 degrees. The other symptoms disappeared within a few days. The solution of quinine dihydrochloride should be injected warm and slowly, so as to consume a period of from ten to twenty minutes.

The sensations produced, according to the authors, are those of relief from pain, a sense of tingling and warmth, at first slight dilatation of the pupils, some dizziness,

ness, interference with hearing, and, occasionally, slight mental aberration. Once in a while, vomiting has occurred while the injection was being made.

ACTION OF CHLORINATED ANTI-SEPTICS UPON BLOOD CLOTS

In an interesting study of the action of the chlorinated antiseptics upon blood clots, as conducted by Herbert D. Taylor and Marianne G. Stebbins, in the laboratories of the Rockefeller Institute for Medical Research, and published in *The Journal of Experimental Medicine* for January 1, it was found that not one of the antiseptic chlorine compounds, including Dakin's hypochlorite solution, chlorazene, and dichloramine-T, possesses the power of penetrating blood clots and destroying bacteria contained therein. From these observations, it seems probable that the fibrin of the blood clot is resistant to these substances, since the plasma and the red and white cells are easily dissolved by them.

The lesson to be learned from these observations is, that virulent bacteria may be protected by blood clots in wounds or elsewhere, and that, if it is desired to render such a wound free from infective organisms, it is incumbent to remove all clots mechanically.

CAUSES OF DEATH FROM SALVARSAN

In an interesting paper relative to the causes of early death from arsphenamine (salvarsan), D. E. Jackson and M. I. Smith, of the Division of Pharmacology, United States Public Health Service, state (*Jour. Pharmacol. and Exp. Ther.*, Nov., 1918) that, when the substance is injected slowly in very dilute alkaline solution, no striking results are obtained in an anesthetized dog. The most striking early symptoms of toxicity are, dilatation of the heart, in association with progressively increasing pulmonary blood pressure, and a slow, gradual, but, not severe fall of the systemic pressure.

The cause of these changes is ascribed, partly to the alkalinity of the solution of arsphenamine used, and, in part to the specific action of the drug. The remedy which they have found likely to be of greatest value for the relief of toxic symp-

toms is tyramine. Epinephrin is believed to be contraindicated.

EMETINE IN INFLUENZA

According to P. Lerebouillet, who writes on the treatment of pneumonias complicating grip in *Paris Médical* for November 16, 1918, expectoration in these cases sometimes is facilitated by the employment of injections of emetine. While the indications for this remedy are somewhat difficult to fix and its effects may be slight or even harmful in diffuse forms of the disease, the author has found it of distinct benefit in certain clearly localized types of the disease, and he has employed it with marked success in minute doses in certain tuberculous patients who have been attacked with grip, with resistant fever and presenting well localized lesions. It is peculiarly indicated when there is a marked tendency to hemoptysis.

HYOSCINE-MORPHINE ANESTHESIA IN GOITER OPERATIONS

Every surgeon realizes the danger of operations for Graves's disease, especially from the use of the general anesthetics. In a paper published in *The Lancet* for December 7, 1918, S. H. Rouquette advocates the conjoint use of hyoscine-morphine with novocaine, employed as a local anesthetic.

Thus, for the induction of amnesia, Rouquette ordinarily injects 1-100 grain of hyoscine with 1-6 grain of morphine one hour before the operation, following with a 1-4-grain dose of morphine half an hour later. For local anesthesia, he uses novocaine in a solution containing potassium sulphate, sodium chloride, and suprarenin hydrochloride. During the operation, the room must be kept as quiet as possible, no talking to be allowed. For a possible emergency, such as an attack of dyspnea, cyanosis or restlessness, he keeps in readiness a freshly prepared solution of strophanthin and adrenalin, the effect of which, when administered subcutaneously, is instantaneous. The inhalation of oxygen sometimes is useful when dealing with an attack of cyanosis.

Doctor Rouquette asserts that this combination of hyoscine-morphine amnesia and local infiltration is an absolutely safe method of producing anesthesia, one that

possesses no disadvantages nor any contraindications.

Among American surgeons, objection may be made to following the hyoscine-morphine with a subsequent dose of morphine, because of the respiratory depressant action of this drug.

TRANSMISSION BY COWS' MILK OF B. DIPHTHERIAE

Writing in *The Veterinary Journal* for December last, Mr. G. Gair, an English veterinarian, relates that early last June a serious outbreak of diphtheria occurred in a certain district in his country. He was instructed by the medical officer of health to make a thorough investigation with the object of ascertaining the source of the outbreak; the investigation was to include the bacteriological examination of the milk and water supply of the various dairies from which the milk supply of the affected area was derived.

For the purpose of ascertaining whether the milk supply was implicated, careful examination was made of the udders and teats of the cows, but, no sign of abrasion or old scars was found on them. Samples of milk were taken from each of the dairies, plated on blood serum and blood agar, incubated for eighteen hours at 37° C., with the result that characteristic colonies were observed on the tubes plated with milk of a certain dairy; colonies appeared almost the size of pin-heads, convex surface, whitish yellow in color, circular, moist, and opaque in appearance, remained discrete, did not tend to run together. Although Loeffler's coagulated blood serum is the best medium to use for diagnostic purposes, Mr. Gair found the growths on the blood agar tubes very luxuriant. On ordinary agar, as a rule, growths are slow and colonies small, even twenty-four hours' incubation. The growth, however, was much richer on glycerine agar—5 to 7 percent, and showed all the characteristic granular appearance and irregular borders. On glycerine agar tubes, smeared with human blood, the red color is changed by the diphtheria bacilli, while Hofmann's bacilli do not alter the red color; in fact, the members of the diphtheroid group do not possess this hemolytic power.

Swabs from the throats of the dairy workers were obtained and similarly incu-

bated as above, but in no case was it possible to find a diphtheria bacillus.

The various waters on farms to which the cows had access were examined bacteriologically but with negative results.

It was ascertained that just before and during the outbreak of diphtheria the weather was sultry and dry and that some of the cowsheds were invaded by myriads of flies that settled on the bodies, udders and teats of the cows greatly annoying them. These flies also were found in pools of sewage that had collected, owing to the overflow of a sewage tank nearby and there they deposited their eggs.

It is, therefore, undoubtedly this circumstance that constituted the source of contamination of the milk supply for the district in which diphtheria occurred. Milk secured in other cowsheds in the neighborhood, but in which no flies found access, was used in a circumscribed territory and here no case of diphtheria occurred amongst those using this milk. Every case of infection could be traced directly to milk being derived from the particular sheds that were infested with the flies.

Mr. Gair concludes that an epidemic of diphtheria or, for the matter of that, of typhoid fever, when due to the milk supply will exhibit the following features:

1. Outbreak sudden.
2. Many attacks occur together.
3. The larger proportions of householders will have a common milk supply.
4. Incidence of disease falling on the principal consumers.

A VON-PIRQUET SURVEY

In the interesting and instructive Framingham Demonstration, to which we have alluded repeatedly, a von-Pirquet survey was undertaken some time ago, the results of which are reported in "Monograph No. 5" and reproduced in the *Bulletin of the National Tuberculosis Association* for January. The study was inaugurated:

1. To determine at the beginning of the Demonstration the percentage of positive reactions in a definite age group, as an index of infection for comparison with possible subsequent findings.
2. To determine the comparative reaction percentages for different nationalities, neighborhoods, and so on.
3. To indicate, if possible, certain sources of childhood infection, and certain

WHAT OTHERS ARE DOING

factors that may be of importance in determining childhood resistance.

4. To select those children most needing care, for future special treatment in the schools, at the Health Camp, and elsewhere.

5. To indicate the reliability of the tuberculin test in the younger age groups as an index of genuine tuberculous diseases.

Altogether 460 tests were made in children, between the ages of one and seven years, in all parts of the community (except the rural district) and representative of a variety of economic, social, and racial factors.

The female children showed a distinctly higher rate in the 6 or 7-year group than the males, the ratio being 55 percent to 38 percent for positive reactions. For both sexes combined, the percentage of positive reactions was 33.

The percentage of positive reactions increases consistently with age, ranging from 15 percent for 1 to 2 years up to 54 percent for 6 to 7 years, both sexes included.

Variations in the percentage of positive reactions in different sections of the community seem to fall along racial rather than along economic or sanitary lines. The Coburnville section of the community, inhabited largely by Italians, with hygienic conditions poor and very similar to hygienic conditions in the village of Saxonville, had a percentage of positive reactions of 46, whereas Saxonville, inhabited largely by people of Irish-American, French-Canadian, and Jewish extraction had a percentage of positive reactions of 23.

Classified by races, the percentage of positive reactions for Italians was 51, for American 18, and for the Irish race stock 30. On the other hand, the number of adult cases found thus far is relatively low in the Italian group and, as is well known, the tuberculosis mortality rates for Italians are in general below average in American communities. This holds true for Framingham.

In contrast, the Irish group in the tuberculin study show a comparatively low percentage of reactions, in spite of the fact that tuberculosis rates in Irish stock generally, in Framingham and elsewhere, are uniformly high.

Does this mean that the tuberculin reaction measures the resistance of the child to infection, in which case, with a greater exposure and a more widespread infection among Irish children one might expect to

find a milder or less frequent von Pirquet reaction than would be the case in a more resistant stock?

In the physical examination of the positive cases, no active cases of tuberculosis were discovered, even under five years of age. These children, however, will so far as possible be followed through the period of the Demonstration.

NURSES' TRAINING SCHOOL AT A MISSOURI STATE HOSPITAL

A training school for nurses is a new feature of State Hospital No. 4. Young women, displaying rare intelligence in caring for and handling patients, are in demand; and to secure and retain such type, the institution must maintain within its own walls a training school for nurses. This school will be a torch bearer in the study of those nervously and mentally ill. It will instruct attendants to encourage the timid, comfort the depressed, and contribute to the cheerfulness and contentment of all. It will also give a chance for good and useful occupation for worthy and purposeful young women who have been denied the higher educational advantages and those who must be entirely self-supporting during the period of training.

The lectures of the medical staff to the class of 62 will be the most potent single factor in encouraging and helping young ladies in this, the greatest work for human uplift. We heartily commend the progressive spirit of Dr. J. L. Eaton, Superintendent, in establishing this school, the result of which will be trained and efficient attendants, drilled in specific duty toward patients.—From *The Farmington, Mo., News*.

INFLUENZA IN SWITZERLAND

The Practitioner, for December last, abstracts, from *Correspondenzblatt für Schweizer Aerzte*, an article by Professor Paul Demiéville, of Lausanne, according to which there has been an increase in the virulence of influenza since the outbreak of the epidemic in May, 1918, and to a large extent this has been due to the development of the disease in thickly populated areas. With this increase in virulence, influenza has very rapid and intense toxic qualities, from which arises vasomotor paralysis, resulting so frequently in serious

complications of the lung, congestion and bronchopneumonia. The professor believes that hypostasis has a considerable share in bringing about these ill-effects, and that these pulmonary complications, especially in the early stage, are localized at the base in consequence. A premature return to work or even getting up too quickly after the first fall of the temperature has, together with too sudden a resumption of big meals, been the most frequent cause of relapses. It is a point of capital importance, which can not be insisted upon too strongly, to arrange for the complete restoration of the patient's strength by avoiding even the slightest cause of exhaustion. The large doses of alcohol, so popular in lay treatment of the disease, have a most deplorable effect, and, moreover, often increase the severe headache.

THE TREATMENT OF INFLUENZA

In the treatment of influenza, Professor Paul Demiéville, of Lausanne, whose article was referred to in the preceding, insists upon the greatest possible care in the management of the patients. Above all, these should never be made to sit up in bed for any purpose except of extreme urgency, and then only with assistance and support. Purging is inadvisable, a simple laxative being all that is necessary. Everything liable to set up excessive sweating should be avoided, except during the first day or two. However, free diuresis should be promoted by encouraging the copious ingestion of water, lemonade and the like, in order to relieve the system as rapidly as possible of the intoxication, thus allaying headache and fever. In case of intense headache, an ice-bag or cold compress renewed every minute for half an hour is advisable. In ordinary cases, the fever will last two or three days and then disappear spontaneously; no further antipyretic treatment being called for. If patients insist on prescriptions, Professor Demiéville orders an acid mixture of hydrochloric acid in dilution of one to two hundred. He condemns the use of all antipyretic drugs since they are all depressants, more or less paralyzing the motor nerves, enfeebling the heart, and often upsetting the stomach. All of them, moreover, reduce the hemoglobin and lower the organic defenses at a time when it is par-

ticularly urgent to support them as much as possible.

If the temperature has not fallen after the first day or two, active measures should promptly be instituted against pneumonia and the heart failure which so often accompanies it. Counterirritants, cupping, pneumonia-jackets, and other measures should be applied, the heart and circulation being watched anxiously. Benefit will accrue by giving caffeine, digitalis, or large doses of camphor, 1 to 2 mils of a 20-percent oily solution with 15 percent of ether added. The patient should be kept in bed in a sitting position, and, even in the gravest cases, should be lifted into an armchair and remain there for four or six hours a day. The Fowler position is as useful to physicians as to surgeons, and placing the patient in an armchair is of very great value when the heart is irregular and depressed.

Fluid nourishment should be given until the temperature has been normal for two days, and the return to solid food must be made gradually and cautiously. The patient should not be allowed to get up from bed until a day at least after he has been given solid food. Getting up too soon is the most fertile source of relapses.

ADRENALIN AND PITUITARY SOLUTION FOR ASTHMA

Bensaude and Hallion report the results obtained in the treatment of asthma by a mixture of adrenalin and hypophysial extract. Each mil of the solution contained half a milligram of adrenalin hydrochloride and an amount of hypophysial extract, freed from albumen, corresponding to 0.25 Gm. of the fresh gland. It is put up in ampules, sterilized and ready for hypodermic injection.

The dose usually given was 1 mil each day for adults; for children, the dose was decreased as nearly as possible in proportion to weight. The mixture was given in cases of so-called essential asthma, and in a few cases of persistent spasmodic cough. Nearly all the patients treated, ranging in age from eight to over sixty years, experienced speedy relief of the asthmatic attack. The effect began to be felt in from two to five minutes after the injection, and one was enough, as a rule, to cut short the fit. It brought about so much relief

that, in night attacks, the most usual form, the patient was able to settle down and enjoy a good rest for the remainder of the night. Not only is the immediate fit relieved, but it appears to have an influence in postponing later attacks. Patients who have been accustomed to rely upon morphine for relief have expressed their preference for this mixture. A further advantage is, that the effect does not get less on repetition and a habit is not engendered. (*Presse méd.*, through *Pract.*, Dec. 1918.)

THE TREATMENT OF MALARIA

With a view of ascertaining the comparative efficacy of large doses of quinine as compared with small doses in the treatment of malaria, both combined with adrenalin and pituitrin, J. H. K. Sykes, Temporary Captain in the Royal Army Medical Corps (*Pract.*, Dec. 1918, p. 346) placed the patients as they were admitted to the hospital in one of two groups.

The treatment extended over three weeks and that common to both groups was as follows: The patients were kept in bed the first week, allowed up half the day the second week, and all day the third week, with physical exercises and route marches. On admission, quinine sulphate grs. xx, and aspirin, grs. x, were given. At night, calomel grs. iii, followed in the morning by mistura alba. All the quinine administered was in solution. A mixture of citrate of iron and ammonium, grs. x; liquor arsenicalis, m. iii; water to make one ounce, was given three times a day after food during the three weeks, the dose of the arsenical solution being increased by one minim at the beginning of the second and third week. On the temperature becoming normal, the patients were placed on ordinary hospital diet.

In addition to this treatment, the special quinine treatment was as follows:

In group A, during the first week, 20 grains of quinine sulphate were given daily, four hours before the expected attack. During the second and third weeks, 3 grains of the drug were given every three hours through the twenty-four. A hypodermic injection of pituitary solution, 0.5 mil, was administered every fourth day, two hours before the quinine dose.

In group B, during the first week, 20 grains of quinine sulphate were given daily,

four hours before the expected attack. During the second week, the dose of quinine was reduced to 17½ grains. During the third week, the reduction was carried to 15 grains. One mil of adrenalin solution was given every fourth day before the quinine dose.

On discharge, each patient was given a sufficient quantity of quinine to last for several days. Also, his medical officer was asked for further information and it was requested that the patient should receive 60 grains of quinine weekly, if possible, in daily doses of 10 grains, excepting Sundays, until three months had elapsed since the last attack. In case of a relapse, information was asked for.

In both groups, patients improved rapidly as to their general condition. In group A, twelve patients, or 72 percent, relapsed within three months. In group B, three only, or 25 percent, relapsed.

The author does not think that the administration of pituitrin or adrenalin caused the difference in the results of the two methods. He concludes that this is decidedly in favor of the large-dose treatment, in contrast to his previously conceived notion, and better than the results obtained previously by intramuscular injections of quinine.

THE PREVENTION QF BLINDNESS

The National Committee for the Prevention of Blindness, 130 East Twenty-Second Street, New York City, has issued, as Publication No. 9, a summary of the state laws and rulings relating to the prevention of blindness from babies' sore eyes. Physicians are urged to ask for copies of this summary for their information. It indicates a very gratifying improvement in legislative action in this matter.

The first statutory requirement which should be made by all the states would seem to be the compulsory reporting of all cases of babies' sore eyes to the local health officer, with a penalty attached for not doing so. Medical attention could then be provided for all uncared-for cases, while the information secured regarding babies who are attended by physicians, as well as those who are not, would be valuable in showing the frequency with which this disease occurs and the frequency with which injury results from its neglect.

Let's Talk it Over

Studies on Food Economics

Alcohol as a Food

IN the month of May, 1900, I read a paper before the American Medical Association, in session at Atlantic City, New Jersey, which was afterward published in *The Scientific American Supplement* for June 6, 1900. This paper was intended as a refutation of the proposition of Professor Atwater, published in Bulletin 69 of the United States Department of Agriculture, that alcohol is a food. Below I give a synopsis of this article.

As I understand Professor Atwater, he claims that alcohol is a food, inasmuch that it is oxidized in the system the same as starch, sugar, and fat, in which process force and heat are generated. Hence, that it can act as a substitute for such foods. Let me quote his own words: "It has been claimed that I say, that alcohol is a food. Mrs. Hunt says she understood it so. If anyone did understand it so, let me say again what I said yesterday: Alcohol, if a food, is only a very limited food."

In the same address, he is reported as saying: "Is alcohol a narcotic? Why, yes, I suppose it is! Is alcohol a poison? Why, yes, under certain circumstances alcohol is unquestionably a poison, a narcotic poison."

Again he is reported as saying: "Alcohol can not serve for building body-tissue. It contain no nitrogen, but, it is commonly supposed that it can be used in limited quantities for fuel. These experiments (at Wesleyan University) were planned to compare its action as fuel with that of the fat, sugar, and starch.

If these reported statements of Professor Atwater are correct, then, in his output of the results of his experiments he has been greatly misunderstood. As I understand his teachings, they simply amount to this:

Alcohol being oxidized in the body, and oxidation being but a form of combustion,

therefore, "when partaken of by man in limited quantities, it performs a like function with sugar, fat, starch—that is, the production of heat; therefore, alcohol can with propriety be classed as a food." He does not claim it is a good or a proper food or that it can be substituted for natural foods, such as fats, sugars, and starches, but, on the contrary, he claims it can be used on'y in very limited quantities as a substitute for these foods, and that it is a narcotic poison.

This, then, is the outcome of those great and costly scientific experiments heralded at great expense through this broad land, to the deep concern and horror of the unscientific temperance-people, and of such great comfort to the lovers of the "social glass".

Professor Atwater's own figures, as set forth in Bulletin 69 of the United States Department of Agriculture, do not support his claim.

He states that, whether the body (of the man experimented upon) was at rest or at work, it held its own just as well when alcohol formed a part of the diet as it did with a diet without alcohol. His tables, on the other hand, show at once that, when alcohol is substituted in part for carbonaceous foods, there is an increased loss of body-nitrogen.

I can not, therefore, understand or accept his statement, that "alcohol protected the material of the body just as does the corresponding amount of sugar, starch, and fat".—(Prof. Seneca Egbert, of the Medicco-Chirurgical College of Philadelphia, and Prof. Frank Woodbury, of the Philadelphia Polyclinic College for Graduates.)

"The third conclusion, that the alcohol protected the material of the body from consumption just as much as the corresponding amounts of sugar, starch, fat is

far from being a justifiable conclusion from data given in Bulletin No. 69. The experiments there in which alcohol was used show an actual loss of nitrogen, showing a consumption of the body-proteid during the period.

"Professor Atwater can draw but one tenable conclusion from Bulletin No. 69; namely, alcohol is oxidized in the system, but, is not a food."—Winfield H. Hall, professor of physiology.

"One fails to find any support for the view that alcohol, like corresponding amounts of sugar, starch, and fat, protects the body against proteid waste, in Doctor Atwater's own figures. Thus, in experiment 7, where 417 Grams of proteid were given in four days, there was a loss of nitrogen equivalent to 48.2 Grams of proteid.

"In the other alcohol-experiment (number 10), there is a similar though smaller loss of nitrogen. One is compelled to admit that these experimental data do not support this third conclusion of Doctor Atwater.

"Indeed, if persons on a diet adapted to keep them in nitrogenous equilibrium regularly showed such losses of nitrogen while using alcohol, as are shown in Doctor Atwater's tables, we should have very satisfactory evidence that alcohol was acting as a poison to the cells of the body; that is, as a protoplasmic poison.

"The two Atwater experiments with alcohol (in Bulletin No. 69) were carried on for so short a period that they throw no light whatever on the food-value of alcohol when used continuously.

"Even if these experiments demonstrated that alcohol can replace a portion of ordinary nonnitrogenous food during four days in a healthy man, this fact would afford no scientific basis for the view that such replacement can be indefinitely carried on without detriment to the organism.

"It is difficult to believe that an investigator occupying an important government position should be so unintelligent as to give utterance to views favorable to the use of alcoholic drinks on the strength of experiments of such limited scope as those published in Bulletin No. 69." (C. A. Herbert, M. D., professor of pathological chemistry, University and Bellevue Hospital, Medical School, New York.)

Prof. H. W. Conn, Prof. Atwater's associate in the above-named experiments, took care at an early date of their discussion to

place himself before the public in the following reported position:

"Alcohol is not used as a food. It is always used for its influence upon the nervous system, and one of the well-known results is, that, at least among Americans, the use of alcohol in small amounts is almost sure to pass speedily into its use in large quantities.

"To state that alcohol in any quantity is safe, is a woful misinterpretation. No one can state what is a small and what is a large dose.

"A physicist could experiment with gunpowder and prove it is easily oxidized and give rise to a large amount of heat and energy. From this, it might be argued that gunpowder is a most useful kind of fuel for cookstoves.

"Such a conclusion would be hardly less logical than the conclusions that have been drawn from these experiments with alcohol, and which regard it as a useful food for the body.

"Gunpowder is a very unsafe fuel, because of its secondary effects, and, in the same way, the food-value of alcohol can not be determined by its power of being oxidized, but, must include the consideration of its secondary effects as well."

But, suppose we do for a moment stop and admit for the sake of argument that alcohol in limited amounts, on account of its being oxidized in the body and, therefore, of liberating latent energy and generating heat, may be classed as a food, does it not logically follow that all those drugs and chemicals that undergo oxidation in the body are foods "when taken in limited amounts", whether they be narcotic poisons or anesthetics, and must, in consequence, be admitted into our lists of foods?

Another thought! It is claimed and admitted that alcohol, being an anesthetic and narcotic, has the power (and exerts the same) of dilating or relaxing the small arteries and capillaries, admitting a larger portion of blood than ordinary, and that the blood at this point loses a large amount of heat; and it is further claimed, and has not been successfully disputed, that the loss of heat in consequence is greater than that produced by the oxidation of the alcohol.

If these statements and positions are correct, what becomes of the hypothesis that "alcohol is a food to a limited extent"? What sort of bank assets would a man have who, having on deposit \$25, deposited

\$25 more and drew out \$50? You would say that man's assets were nil!

Likewise it is with alcohol: it does oxidize in the body, liberating heat, but, it at the same time causes a greater loss to the body in another direction by its poisonous action on its tissues.

A. T. CUZNER.

Gilmore, Fla.

[To be continued.]

INFLUENZA—A "BUMP"

Reading CLINICAL MEDICINE and *The Medical Council* this week, one would think we had better go back to Bible times and "send for the Elders and be rubbed with oil". The writers seem to me good writers but darned poor doctors. I saw ten cases of influenza last night in two families and twenty-eight the day before—one, with a temperature of 103, gave birth—seems to be doing well under the circumstances. I can record two more cured of pneumonia—only one death out of seven cases. Now, I can do more for my pneumonia with 1 drop each of fluid extract aconite and fluid extract digitalis every three to four hours than anything I can give, with frequent bathing of entire chest with equal parts of spirits of turpentine—camphor—coal oil and lard. Don't use much phenacetin or quinine.

Did I tell you, out of four to five hundred "flu" cases I only lost one? There were five cases of pneumonia and the one death occurred because my whisky gave out. Ammonia and strychnine did no good.

W. S. CLINE.

Woodstock, Va.

[Perfectly simple, is it not? Yet . . . we fear that Doctor Cline was somewhat in the opposite direction to that which he blames in us and in the writers to the *Medical Council*. We confess to having conceived a wholesome respect for influenza and it keeps our thinker going to decide upon those therapeutic measures that are most suitable for each individual patient (not, case). Undoubtedly aconite, or aconitine, and digitalis, or digitalin or digipoten, will work well in some cases. We have noted several instances, however, in which this combination was not sufficient and additional measures had to be adopted. The treatment outlined by Doctor Cline undoubtedly is good. To the present writer

it does not seem to be adequate for all possible emergencies. Suppose some of the readers of CLINICAL MEDICINE come down on Doctor Cline and tell him what they think about it. Let's talk it over and let us find out how to treat—not, influenza but, patients ill with influenza.—En.]

IS INFLUENZA CAUSED BY POISONED ATMOSPHERE?

I have been a reader of CLINICAL MEDICINE for a number of years, but I have studied influenza ever since its first appearance, last year, in New York, and, as my own opinion was so different from that of most writers of the medical profession, I lay low and said nothing. Ere long, you could see influenza referred to on every page in the papers, and the disease was running wild all over the country. One day, a fellow met me on the street, with a newspaper in his hand, and excitedly said: "Doctor, what are you doing about this new disease? Are you studying up for it? It is just awful, killing everybody wherever it goes." I hardly knew what kind of an answer to give, but, calmly replied: "O, yes, I am ready for it." Then the man wanted to know what about being inoculated as a preventive measure. I told him that a great many physicians were using a vaccine, but, that I would use that only in patients demanding it. This ended our conversation.

Now, right here, I wish to state that I never had any faith in antigrip vaccine, because it seemed that no one knew just the real cause of the disease. Some claimed that it is caused by the influenza-bacillus, others, that a mixed infection with pneumococcus and various forms of streptococcus and staphylococcus is the cause. Therefore, they resorted to the old shotgun prescription and gave all of them, in the hope that some among them would hit the mark.

A few days after that talk with the gentleman on the street, I was called six miles into the country to see two patients in the same home. They complained of a "severe cold," achey pains all over, especially severe pains in back and head, sneezing, and watery eyes and nose. "Influenza", I remarked. "But", said one of the patients, "where could we have gotten it? We have not been away from here in three weeks and no outsider has been here."

Later, it proved to be genuine cases of influenza, as it is called by so many.

I began to be a strong believer in a poisoned atmospheric condition; but, I was afraid to mention this notion, for fear that I should be called "fogie". However, my next thought was as to a course of treatment. Therefore, instead of looking for something new, I resorted to the old common-sense treatment. First, to give a purge, then something to relieve the pain and reduce the irritation and inflammation; and for this, I gave equal parts of quinine, Dover's powder, and phenacetin, with just enough powdered cascara to counteract the binding effect of the Dover's powder. For the cough and heart, I gave compound of syrup cocillana, with ammonium chloride, although in some cases where the heart gave much trouble, I also gave digitalis.

The treatment was so satisfactory, that I employed it almost as a routine, except in some instances where the patient required a laxative every day and others an intestinal antiseptic, for which I gave iodized emulsion. Now, here is the point I wish to make—excepting a tuberculous family of six, who had no one to cook them food or even to give them medicine (they had to get up out of bed and get their own medicine, and five out of those six died). I never lost a single one out of my 200 patients. One other patient died after having had the disease two weeks and in whom pneumonia developed, sending for me only a few hours before death ensued. But, then, that was because of his neglect, and not, really, my case. I do not know but that this may just have been Providence, but, I certainly felt rejoiced over these few deaths.

The epidemic passed by and I kept silent until today. A friend of mine from New Orleans dropped into my office for a few hours' chat; he mentioned the influenza, having lost some relative during the epidemic in his home city. I could not be silent any longer; therefore, I told him of my belief, that this disease depends upon a poisoned atmospheric condition. In support of my view, I wish to state that, after treating all my many patients, I never contracted the disease myself, using no preventive other than fresh air and an oil spray. However:

Last week after having had no case of influenza for six or seven days, one night I burned a considerable amount of gaso-

line in a room adjoining my bedroom, vulcanizing some auto-tires. On retiring, I failed to raise the windows, while the door between the two rooms was opened. The next day, my wife and I experienced all the symptoms of influenza. We immediately began the treatment above explained, and in twenty-four hours we were able to get out of bed, with only some nervousness, soreness, and weakness remaining. So, after talking with my friend in my office. I went to the post-office and there found my December number of CLINICAL MEDICINE. Opening it, the first article I read was Doctor Croft's, of Chicago, who spoke of a poisoned atmospheric condition. Well, I must say, I rejoiced again as this was the first man to speak of the cause of influenza as I believed it to be. Now, I do not think that Doctor Croft, of Chicago, will feel complimented to know that a "Hill Billy" doctor down in Osyka, Mississippi, agrees with him regarding the cause of influenza, nor will he consider my differing with him as to the treatment of any importance; but, just a few remarks, please.

Doctor Croft states that opium in every form is contraindicated, as it checks all the secretion. From my experience in the use of Dover's powder, I fail to see where and why it is contraindicated. I agree with him that acetanilid is contraindicated. But, nothing seems to ease the pains better than phenacetin and Dover's powder in 2-grain doses repeated every two or three hours; and that, surely, is not enough to do any harm to the heart; and, as Dover's powder contains ipecac and I combine cascara with it, that overbalances the decreasing effect of the opium upon the secretions; and, yet, we get, from the opium, the reduction of the irritation and inflammation of the mucous membrane. Therefore, we must have had the bacillus catarrhalis, pneumococcus, and the different forms of streptococcus- and staphylococcus-germs in our nostrils, while the poisonous gases prepared the field for their growth, thus confusing the microscopists. But, I have never realized any results from inoculating these germs for influenza.

OLIVER B. BARRON.

Osyka, Miss.

[We can not help but think that the great importance in the causation of the influenza of the present epidemic that is attributed to a vitiated atmospheric condition

is somewhat farfetched. We do not deny that atmospheric disturbances may play a certain role, but, it is difficult to see how this can produce a disease that presents all characteristics of an infective malady. Moreover, serious disturbances in atmospheric conditions, such as may be assumed to have been active in European regions, did not exist in our own country. We do, however, have to deal with the psychic factor of a pronounced mental disturbance of the entire nation, owing to the war. Further, here, as well as in Europe, the element of crowd-influence enters especially in the enormous military and naval camps, and the present writer believes this to have been a far more fruitful agent in promoting the virulence of a given infectious disease than the atmospheric factor adduced by Doctor Barron.

However, this view is before the meeting for discussion. Doctor Barron agrees with Doctor Croft. Are there any other speakers?—ED.]

INFLUENZA IN GUATEMALA

This terrible epidemic of socalled influenza is desolating Guatemala, as well as other places. It is the worst thing we have ever faced, and the death-toll is enormous, especially among the poor ignorant Indians. These have been found by scores dead and dying along the public highways and the scenes of suffering and need would melt the hardest heart.

Of course, this thing had to come when there was least preparation for it, when the supply of drugs was at its lowest ebb in the country, owing to the restrictions placed upon exportations from the United States, and when, in many instances, the vital resistance of the people was low because of scarcity of food.

Here, we have had some 400 deaths, principally among the Indian population, but, in some other towns, the number is very great, and in one town near here, the 2,000 mark has been reached, with almost identical toll in many other places. Reports from Mexico are more alarming than those from this country, and the percentage of deaths is very large, indeed.

We have been working day and night here, and have been very successful in the treatment of the infected ones, even though some of the symptoms have been very severe, such as profuse hemorrhages from

the nose, eyes, lungs, and intestines. In some cases reported, the eyes have ruptured, and I was able to cure a little child whose eyes were almost destroyed by severe hemorrhages.

I have found that calx iodata, in 5- and 10-grain doses, often repeated, is one of the best remedies, given in association with salol and eupatorium. I also have used lobeline sulphate and gelseminine hydrobromide hypodermically, besides streptococic-pneumococcic bacterin.

In two cases, I gave echinacoid in large doses, with the result of a very quick recovery. I believe the ideal treatment would be, hypodermic or intravenous injections of echinacea and calx iodata, if possible to prepare.

I have prescribed enormous doses of calcium sulphide, but, with only indifferent success, I finding it no better than the remedies aforementioned.

I have to report, with great sorrow and the most profound regret, the premature death of Dr. Alvin M. Struse, director of the Rockefeller Foundation in Guatemala, who has just fallen a victim of pneumonia consequent upon a severe attack of this devilish "influenza". (Some Hun name should be given this disease, as it has all their characteristics.) It is too bad that medical science could not save Doctor Struse, a young man, robust, and in the fullest possession of all his wonderful talents. It almost makes me rebel, when I think of the limitations of man! Dr. Struse was in the early thirties, but, had given several years to the finest kind of work in this republic, for the good of suffering humanity, in his campaign against the hookworm; later, his magnificent work in earthquake-ruined Guatemala City, where he served as director of the Red Cross work; still later, in his noble campaign against yellow-fever, which had just been eliminated from the country; and now, in his activity against this devil-hunniish disease, which claimed him as its victim.

I wonder why the more useless ones are not taken! Why must the best and brightest and noblest souls be cut off, when they are so few? And especially in these countries, where such men are, indeed, scarce!

Doctor Struse had been appointed chief of the national board of health, in which capacity, his great ability and keen intelligence made him doubly useful to the people, since that work was in line with

the Rockefeller plans and gave him greater liberty.

He is deeply mourned by thousands, yes, by the entire country, and the worthy President of Guatemala, in answer to my telegram of condolence, is the spokesman of two million people when he says: "You have said the truth: We have lost a loyal, sincere, and disinterested servant of my country. God has received him in His bosom, and his family will receive the blessing of everybody."

The President loved him, as did we all; we are heartbroken at his disappearance. I doubt whether the Rockefeller Foundation will be able to fill his place here.

C. F. SECORD.

Chichicastenango, Guatemala, C. A.

INFLUENZA IN IDAHO

The first diagnosed case of influenza in the city of Pocatello (Idaho) was isolated October 10 and, in the eight weeks following, over 4,000 patients were treated, and of these, 141 died, all from pneumonia. The number of cases increased rapidly and reached the highwater mark of 85 cases in one day. During the week of November 3 to 10, inclusive, there were 250 cases and 37 deaths.

Pocatello is a city of 16,000 people, including over 2,000 employees of the Oregon Short Line. The disease was especially severe among these workmen and the contagion was rapidly carried by them to every part of the city. In nearly every instance where an attack occurred, other members of the respective families contracted the disease and helped to spread it to relatives and friends who volunteered assistance in nursing. Isolation of the patients, where possible, was more effective than was close contact; it being found that close contact of mild with severe cases increased the mortality of the disease. Mild cases did not improve as quickly as they should, under such conditions. Fresh warm air and good nursing—unfortunately, not always available—and soft diet met the indications.

The symptomatology is similar in all the cases, although differing in degree. Headache, chilliness or a distinct rigor, backache, the one symptom generally present, in addition to high fever, burning in the larynx, quick onset, and, in a few hours, prostration or great weakness. If the pa-

tient went to bed, sweated, was properly guarded against chilling and forced to remain in bed for four or five days, the attack nearly always has been mild. If he is exposed or chilled in any way, as by uncovering the arms or putting the feet from under the cover, respiratory complications invariably are the rule. The cough becomes more frequent, dry, hacking, and the patient complains of soreness or tightness in the chest or down the length of the sternum. There is frequent complaint of hoarseness and croupy cough, not alone in children, but, also in a few adults. Children have high fever, with somnolence, but, no backache or headache; in others, there may be restlessness and vomiting. In very young children, vomiting and convulsions are observed. The cough is aggravating and hard to control.

Nosebleed occurs in a great number of the cases. At the height of the epidemic here, there were many cases of severe hemorrhage from the nose and throat, from the bowels, and from the lungs. In cases with lung complications, the sputum is hemorrhagic, from pink coloration to clear blood. In late cases, those in which there was almost complete consolidation, there were a few instances of prune-juice expectoration. There is elicited the peculiar flat percussion-note over the affected part, usually found first at the bases of the lungs or at the margins of the lobes. Crepititation appears early. Severe pain is a symptom in many cases. A few patients show pleural effusion.

One case of empyema occurred, and many of sinus and mastoid invasion, also of median otitis. There were encountered a few cases of meningeal involvement, with hemiplegia. Low-muttering delirium occurring with low temperature after a run of 104° to 105° F. One case of herpes zoster followed a mild attack. Then, there is the "flu-eye," a photophobia of mild degree; no tonsillitis is seen to any marked extent; but, laryngitis and bronchitis are common. In the pneumonia-cases, there is high fever, with a good pulse—about 100 or less—slow respiration, usually 26 to 36, until respiratory and cardiac failure is imminent. Acute dilatation of the heart may occur suddenly, the patient progressing favorably up to that time. There were several cases of acute septic endocarditis.

There occurred a few cases of the abdominal type. These victims have acute

diarrhea and a typhoid-like range of temperature, running for from four to seven days at 104° to 105° F. In some of these, there was hemorrhage from the bowel, with tympany and prostration.

I institute quarantine of all persons in the household and strict fumigation after the disease had subsided, and isolate the patients for ten days thereafter. It is my belief that these patients are carriers and the use of chlorazene and dichloramine-T, in the form of sprays, will tend to limit the spread of the disease, while in strict quarantine we have one of the most useful of the methods advocated for the control of this infectious disease. In this, I am aware, I am going far beyond the stand taken by other health-officers in this state and the state of Utah and perhaps in most localities; yet, I am certain that I am right. At any rate, on instituting quarantine of the household, the sick and the well, the number of new cases diminished rapidly, and one new case a day was the rate for two weeks.

In the beginning of the epidemic, I made the cases reportable in this city, and the state followed suit. I advocated closing of the schools at once, and think it the proper thing to do. The state followed suit in ten days. We stayed closed here until the deaths were about 2 a week, and then we opened the schools, so far without any increase in new cases. If we are again invaded, the infection will come from the outside.

The treatment has been symptomatic. Fresh air (not cold), nursing, isolation, frequent feedings of small amounts of liquid food meet the indications in the early stages. The salicylates or acetylsalicylic acid, without Dover's powder or acetanilid or quinine, and hot drinks, so as to produce sweating, will relieve the aching and headache and reduce the temperature. Keeping the patient covered and protected from exposure or drafts will prevent lung complications.

Influenza-vaccine seems to have given results in the early cases. "Clean up" and "keep clean" still holds good in this as in all other diseases. Free evacuation of the bowels, free action of the skin and kidneys early in the disease lessens the toxemia and hastens recovery. A preliminary course of calomel followed by castor-oil and then by daily soapsuds enemas seem to act better than magnesium sulphate.

Citrate of magnesia, also, is well tolerated by the patient.

For the burning in the larynx and bronchi, the cold-pack or the icebag will invariably relieve. In patients that do not stand the application of cold (and, in influenza, cold applications are not well born, as a rule), calx iodata, one to three tablets (gr. 1-3) every hour until relief, and then every three hours, will do the work promptly. It has done exceptionally well in the complications especially in children with laryngitis and bronchitis. In the hoarse, croupy cough of laryngitis, it is best given in hot solution, with emetine. The dose may, with benefit, be increased, for adults, to 1 or 2 grains every two hours.

Gesminine hydrobromide is indicated in high fever, flushed face, full bounding pulse, together with veratrine hydrobromide to effect. In children, gelseminine is a certain remedy for the above indications. It relieves the backache and restlessness and is given in the early stages of the attack in association with aconitine hydrobromide, and with calx iodata, if there is respiratory irritation.

In sleeplessness, I have found somnus of benefit, without any resulting depression. All narcotics are to be condemned in this disease. They are unnecessary and, in the respiratory complications, are deadly. Pain can be relieved in other ways—by external applications, such as hot camphorated oil and oil of turpentine, libradol, (very efficient), hot-water-bag, and the pneumonia-jacket.

Cough is relieved by inhalations of steam and eucalyptol. Plenty of fresh air, without chilling the patient, is one of the greatest aid to control the cough. Expectorants are of little benefit. Sweating relieves in the early stages.

There takes place a great loss of chlorides, and these may be supplied by means of enteroclysis and by drinking the alkaline saline waters. Sodium bicarbonate and sodium chloride may be injected intravenously, glucose to be added in the proportion of 2 to 5 percent.

In the pneumonic cases, nuclein, 1 mil (Cc.) subcutaneously, should be given twice or three times each twenty-four hours, in order to increase leukocytosis. In this disease, there is leukopenia, and nuclein is the logical remedy.

Antipneumococcic serum has been employed in many cases, with good results in

some and without seeming results in others. The good results were shown in an immediate drop of temperature. A patient with bronchopneumonia of seven days' standing, with a temperature of 104 to 5° F., and increasing consolidation in the right lung, and slight invasion in the left, was given 120 mils of the serum beneath the breasts, and a subnormal temperature followed in twenty-four hours, with no further rise, and with immediate resolution. Three others in a serious condition were given 500 mils intravenously, without much effect on the condition. A number were given 50 mils subcutaneously, with decided benefit. The doses were repeated at 12- to 24-hour intervals. Nuclein was given with benefit in reducing the temperature and increasing the resistance of the patient. In one case 50 mils of the Carrel-Dakin solution was given intravenously, with a decided lessening of the toxemia, as shown in the mental condition and a decrease in the number of respirations. This patient died of double bronchopneumonia. The cyanosis was very marked, the temperature high and respirations over 60. The prognosis was bad from the beginning. The solution named was given as a last resort and might have been of greater benefit earlier in the attack. The bacterins and vaccines have been used frequently, but, not with any great benefit in the pneumonic stage of the disease.

As a prophylactic, vaccine seems to be the only remedy we have to control the disease and, in conjunction with strict quarantine, will do more to limit the number of attacks than will any regulation toward closing the places of business and limiting crowds. Isolation of the patient in central isolation-hospitals is an excellent means of control, especially where nursing-aid is deficient and physicians are overworked, as is the case in every community at the present time.

The army supplies, cots, and blankets, doubtless will be stored for future demand and become moth-eaten and worthless in the waiting. There is an immediate need for all such material in hundreds of communities all over this land, and the logical solution of what to do with these supplies is, to place them at the disposal of the state authorities for use wherever needed. That they will be needed soon, when the recurrence now anticipated is a thing present, goes without question. Then the ques-

tion of isolation of the patient will be solved and the spread of the epidemic controlled.

R. J. SMITH.

Pocatello, Idaho.

A SPECIFIC FOR INFLUENZA

I have thus far treated about 400 cases of this disease. About 35 had pneumonia as a complication. One patient, about 10 years of age, developed colitis as a sequel but is convalescing. One had suppression of urine, and pneumonia. Another developed, in addition to pneumonia, enteritis, cervical adenitis, otitis and meningitis. A few had otitis media.

I wish to state, parenthetically, that the socalled pneumonia is generally a sort of edema of the lungs due to failure of the lesser circulation and is not inflammatory as is pneumonitis.

Early in my treatment I lost 5 cases altogether. In the last 100 cases, however, I had no deaths whatsoever. My treatment is symptomatic avoiding all depressing remedies especially coaltar derivatives. My lack of fatalities with the last 100 cases, I attribute mainly to my use of a serobacterin of a very heavy suspension containing in each cubic centimeter 1,000 million influenza bacilli, as well as 1,000 million of each of pneumococcus and streptococcus. The average beginning dose for an adult is 3-10 mils of the above suspension. For infants or children 1-10 mil. I have given this last dose to several infants and generally one or two doses is all they require even with a severe complicating pneumonia, so called. If improvement is not manifest in 24 hours and no symptoms of a reaction supervene, I increase the dose by 1-10 mil. The increase is kept up till improvement is manifest after which the interval between doses is lengthened—oftentimes no more doses being required. I have seen 4-10 mils produce focal and constitutional reaction in a patient within in 24 hours, which subsided in 72 hours, leaving the patient convalescing.

I am confident that, if this heavy suspension is used on well individuals, it will produce symptoms similar to those of Spanish influenza. I urge the cautious use of this serobacterin. It will do the work as nothing will. It is as nearly a specific as is quinine in malaria. As stated above, if a reaction follows the vaccination, a

repetition usually is not called for, for, it will prove curative.

M. SHADID.

Carter, Okla.

HYOSCINE AND MORPHINE IN INFLUENZA

Mrs. C. S. B., my youngest daughter, aged 23, in the seventh month of gestation, had a very mild attack of influenza, accompanied by the usual symptoms of a mild attack of the catarrhal form of this widespread disease. I first saw her on October 22, and, by the 25th, her temperature was normal and she was "feeling fine", to use her own expression. On the 27th, she was allowed to spend the day with her sister, residing in this village. On Sunday, I brought her to our home, she ate a good meal at noon, and still was feeling good.

By the middle of the afternoon, however, she had grown restless and nervous. An examination showed a temperature of 101° F. She was put to bed and remedies were administered for fever and nervousness. Next day, October 29, not much change was apparent. On Tuesday morning, cough made its appearance, and every attempt to cough provoked vomiting. Her temperature now was 102 degrees. The remedies administered to allay the cough and vomiting did very little good. Examination of the chest at 6 a. m. was negative. She still vomited at every attempt to cough. I examined her at 10:30 a. m. The temperature stood at 102.3° F. An area of about 2 inches in diameter, about 3 inches from the median line toward right, just above the free border of the costal cartilages, emitted crepitant rales (percussion negative, on account of the liver). There was rapid superficial breathing, face was flushed, she complained of a feeling of extreme illness and increased nervousness, vomiting continued whenever coughing was attempted, her pulse was 88, and respirations were 40. Diagnosis: lobar pneumonia in the stage of engorgement. Treatment: aconitine hydrobromide, gr. 1-800; digitalin, gr. 1-64; codeine, gr. 1-12; two granules of each as the initial dose, thereafter one granule of each every fifteen minutes until the patient slept. Four hours of this treatment did not allay the nervousness. She coughed several times, vomiting whenever coughing was at-

tempted. A little rusty sputum was expectorated.

At this point, because I wished to control the cough, vomiting, and the extreme nervousness, a hypodermic of the half-strength granules of hyoscine and morphine was administered, using half of the standard dose. The patient slept within thirty minutes, resting for two and one-half hours. Upon awakening, the coughing and vomiting returned. A little more rusty sputum now was expectorated—tough, glairy, tenacious. Another half-dose of the hyoscine and morphine combination now was given. She again slept for two and one-half hours more, except when awakened, every fifteen minutes, in order to administer some aconitine and digitalin.

At this point, I retired and instructed the nurse to continue the aconitine and digitalin every fifteen minutes, unless sweating occurred, and to call me at midnight. The temperature now stood at 103° F. I was awakened by the patient coughing and vomiting. This was at 1:30 a. m. Another hypodermic of the hyoscine and morphine was given. I wanted her to sleep. Her temperature still stood at 103 degrees. The nurse was relieved, I taking charge. The treatment was continued. At 2:30 a. m., the temperature was 101.3° F. The intervals were lengthened to thirty minutes. At 3:30 a. m., the temperature was down to 100.2 degrees, and she was perspiring. The intervals were lengthened to one hour. At 4:30 o'clock, the temperature was 99.3° F.; she was perspiring. At 5:30 o'clock, the temperature was 99 degrees—which held throughout the day. At 6:30 a. m., the patient awoke and said that she felt fine. She again went to sleep promptly and slept during most of the day. By evening, her temperature was normal and never again went higher during the rest of her illness. Her recovery was uneventful, and her convalescence prompt and uncomplicated in any way.

The only excuse for this report is, that I wish to call the attention of the readers of this journal to the part that the hyoscine-morphine combination played in this instance. I am convinced that it constituted a large factor in aborting this attack of pneumonia, and I firmly believe that this treatment saved my daughter from a prolonged and serious illness, the results of which under any other form of treatment known to me would, in all probability,

have resulted in an abortion and subsequent death.

The salient points are these three; early diagnosis; prompt administration of remedies of proved efficacy; and keeping my patient asleep and unconscious of the seriousness of her condition until the disease was subjugated.

Pain, restlessness, worry, fear, and nervousness only aggravate and increase any illness. Sleep annuls them all.

I sincerely trust that the medical profession may ultimately be brought to realize that there is a more excellent way of practicing medicine than by simply following blind leaders of the blind. For, "there are those who know, and they know that they know; and there are those that know that they know not." But worst of all, "there are those that know not that they know not." And, hence, they will not even try the better way.

That alkaloidal therapeutics may grow strong, live long, and spread fast, is the sincere wish of one who, though doubting, tried it out and made good many times.

Yours for more knowledge and better treatment of the sick.

P. S.—On Saturday, December 14, 1918, this patient gave birth to a girl baby weighing 8 pounds. At this date of writing, December 16, mother and babe are both doing splendidly.

J. W. SHOOK.

Canal Winchester, Ohio.

[The favorable course of the disease in this instance, after the patient had been brought fully under the influence of narcotics, naturally is of great interest. Yet, we are not ready to admit that it was this factor in the treatment that determined the happy outcome; the other measures adopted by Doctor Shook undoubtedly having been contributory. Nevertheless, the absolute quieting of the nervous system probably enabled nature to mobilize its resisting forces against the microorganisms responsible for the pulmonary congestion. As to this, though, the point may be raised that the administration of morphine has been demonstrated to diminish leukocytosis, and, so, a contradictory factor enters into the argument.

The problem evidently is not as simple as appears upon the surface, and we should like others to air their views upon it.

What do the readers of CLINICAL MEDICINE think about it? Won't you give us your criticism upon Doctor Shook's management of the case reported, immaterial whether this criticism is favorable or unfavorable?—ED.]

SODIUM HYPOSULPHITE AS A "FLU" REMEDY

Have you ever considered sodium hyposulphite in big doses, largely diluted, taken at suitable intervals, as a remedy, prophylactic and curative for influenza? If not, and you feel sufficiently interested, give it a trial without delay. Results may please you. Even the bicarbonate of sodium has some effect.

J. H. Beynor.

Spokane, Wash.

[The hyposulphites, as well as the sulphites, act mainly through the sulphur of their composition. Unfortunately, they are quite irritating as well as depressing. Personally, this present writer can not see any advantage in using either the hyposulphites or the sulphites in preference to calcium sulphide, since, according to Sollman, virtually, they act in the same manner. Calcium sulphide, of reliable quality, has "made good" in wide clinical use its claim to recognition, and, besides, is harmless, while the other preparations referred to easily may give rise to troublesome and even alarming symptoms. For himself, therefore, the present writer prefers the calcium sulphide.

Another point is, the employment of an alkali. Sodium bicarbonate, or, better, calcium carbonate is of unquestioned value as all these patients without exception present a very high urinary acidity.

Has anybody else, besides Doctor Beynor, employed sodium hyposulphite? If so, with what results? Let us hear about it, please.—ED.]

TARTAR EMETIC IN INFLUENZA

In response to your appeal to members of the profession for "suggestions, admonition or advice" as to the treatment of patients suffering from the socalled influenza, I will point out the fact that virtually death from this disease, in every instance, immediately results from capillary

bronchitis or bronchopneumonia or pneumonia or pneumonitis. For at least thirty years, I have regarded antimony and potassium tartrate, given in minute doses, as a specific and have used it as such in the conditions so often present in grip this fall, and also frequently in children when the disease is not prevalent. I firmly believe that its universal use would practically prevent deaths from grip.

During the recent epidemic, I gave personal attention to 124 cases of influenza. Early in the epidemic, I lost 3 patients from bronchopneumonia, largely owing to the entire absence of any care of these patients. I had under care many other cases of socalled pneumonia, all of which yielded promptly to the tartar emetic in minute doses. Later, I gave to every patient 1-8 to 1 drop of wine of antimony every three hours. After adopting this course, there was an entire absence of pneumonic complications, except when these already were present when the patient was first seen. When so present, though, the condition was promptly removed by the aforementioned course.

Should you decide to publish this, I sincerely hope that, in the absence of definite information from the laboratories, this statement may reach a few members of the profession who, in view of the fresh invasion, are willing to try the suggestion, based upon clinical observation, of an obscure practitioner like myself.

GEORGE M. AYLSWORTH.
Collingwood, Canada.

THE PROPHYLAXIS OF INFLUENZA

In answer to your request, in CLINICAL MEDCINE, for the best prophylactic for the "flu," permit me to say that my experience has proven that most satisfactory results may be obtained from 5 grains of quinine dissolved in 1-2 ounce of whisky, this dose to be taken, by those exposed, at 8 o'clock in the morning and at 4 in the afternoon. If the patient feels chilly, double the dose.

In addition, I usually give the advice to "keep away from people and out of crowds."

I hope that your readers will try this.
Dubuque, Ia. J. J. BROWNSON.

[A number of our good friends, some of the oldest, brightest, and best of them

all—such men, for instance, as Dr. W. S. Cline, of Woodstock, Virginia—insist that good spiritus frumenti is, after all, the best or one of the best remedies we have for influenza. With this, we can not agree, and we must continue in our protest, even in the face of such strong support as that here given by Doctor Brownson.

Whisky is not a stimulant; on the contrary, it is a depressant. This is the testimony of every advanced pharmacologist. Instead of increasing resistance of the body, it markedly reduces its resistance; and in such a disease as the influenza—where the individual has need for every atom of defensive force for repelling the attack of this terrible infection—to administer depressants, can only be folly.

At any rate, that's the way we look at it. What say our readers? We have epitomized our suggestions for the prevention of influenza on page 805 of the November number of CLINICAL MEDCINE. Put in the fewest possible words, they are as follows:

1. Segregation or, as Doctor Brownson says, "keep out of crowds," and especially avoid contact with the sick.

2. Sterilization of the nasopharyngeal tract, for which chlorazene and dichloramine-T are the best antiseptics.

3. Protective vaccination, using a mixed bacterin of the type recommended by Rosenow, containing the organisms most prevalent in this disease.

4. Avoiding all fatigue, enjoying plenty of sleep, maintaining a cheerful frame of mind, and saturating the system with calx iodata and calcium sulphide.

Has anyone anything better to offer?—
ED.]

A PROPHYLACTIC MEASURE AGAINST THE INFLUENZA EPIDEMIC

Below is the bulletin I posted in this company-town, where we employ 500 men in the lumber-industry. We also quarantined against outside places, and in this way kept the plant running at full capacity. Fright had as much to do with this epidemic as anything, and continually preaching to the people, that there was nothing to be frightened about, helped a great deal to keep them in good physical

condition; consequently, the "flu" never got a hold of us. The bulletin:

SPANISH INFLUENZA

"THE FLU"

Do not be frightened by exaggerated newspaper reports.

Do not think you have the "flu" just because you have a cold or the grip, as you have had many times before this.

I have received from Surgeon-General Blue, of the U. S. Public Health Service, complete instructions for the diagnosis and treatment of this disease. From these instructions and my own experience, I wish to advise everyone to be exceedingly careful about his general health, and there will not be any danger of the "flu."

At the first indication of a cold, get something for it. Use some kind of mild ointment in the nose, also an antiseptic wash for the mouth and throat or else use an atomizer with an antiseptic spray for the nose and throat.

If you have to sneeze or cough, use a handkerchief, so as to protect others. If you "catch a cold," eat less; in fact, eat nothing for twenty-four or forty-eight hours, but, be sure to take a good physic and to drink large quantities of hot water; also take a good hot bath. In other words, "clean out, clean up, and keep clean"—inside and out—and you will be healthy all the time.

The "flu" is merely an aggravated form of grip and is found principally in the centers of population where the people are crowded and congested, as in the army-camps. Brookings is not, in any way, congested, and, besides, is as healthy a place as it is possible to find. People here do not need to worry about this disease, as there is no danger if they take reasonable care of themselves.

Let each one keep clean, inside and out, then forget there is such a thing as disease, and Brookings will be one place on the map that will never have the "flu".

Yours for health,

C. H. LAW.

Brookings, Ore.

[This bulletin is excellent, and we are sure that it had the effect of comforting the people of Brookings and putting them

in the right frame of mind in those cases of the disease that may have occurred in that community. The suggestions throughout are excellent.—ED.]

THE ORIGIN OF "DOUGHBOY"

So far as the present writer is concerned, "doughboy", as a nickname for our soldiers—first, in France, then here, at home—sprung up suddenly in the papers, and then without any attempt at an explanation of its application. It now seems, however, that the term originated during our civil war, according to a note running through the press, the more plausible of two explanations being as follows:

The original "doughboy" was a dough cake baked for sailors, and the doughboy nickname was first applied to the men of the navy. Thus, in a letter written by General Custer to his wife in 1867 he said: "Wasn't I glad I wasn't a doughboy!" Mrs. Custer made this note on the letter:

"A doughboy is a small, round doughnut served to sailors on shipboard, generally with hash. Early in the civil war the term was applied to the large, globular brass buttons of the infantry uniform, from which it passed by natural transition to the infantry themselves."

How the term came to be applied to infantrymen is not clear—; or, does, indeed, the other legend among the army men apply, namely: As one time, for lack of regular buttons for infantry uniforms, big bread-colored buttons for ladies' coats had to be utilized. Because of the resemblance of these conspicuous buttons to their dailyhardtack, or "dough", the idea readily attached itself to the wearers themselves.

After the foregoing was in type, yet another explanation was supplied to *The Chicago Tribune* by a linguistic Parisian (who, by the way, pronounces our "doughboy" as being equivalent to the French "pousse-cailloux"), and he refers its origin back to our Mexican war of 1846, and in particular to the adobe huts encountered by our invading American army. Those red sun-dried bricks are named "adobes", which is pronounced a-do-bies. The author then goes on to say:

"The soldiers were only too glad to inhabit these houses, but, the cavalry, who were obliged to remain in the open, to

sleep in the field, owing to their horses, gave, as a joke, perhaps by jealousy, the nickname of 'dobies-dodgers' to their luckier comrades at arms. It became later 'dobies' by abbreviation; finally, in the many succeeding years, there was born, by corruption, the actual nickname, 'Doughboy'."

ADOLF G. VOGELER.

Chicago, Ill.

HOSPITAL WORK IN PALESTINE

How American Red Cross physicians engaged in relief work here are accomplishing worth-while results in the face of great difficulties—and what they are up against—is shown in a report received from Dr. W. S. Dodd, working at Mejdel, in Palestine. With two capable English trained nurses and three native helpers, more or less useful, Doctor Dodd, his "hospital" housed under tents, performed 252 operations in seven weeks, besides making medical examinations, and giving treatment and counsel to hundreds of the destitute inhabitants and refugees. His report says in part:

"The work of the Hospital was of the plainest sort, it might be called primitive. About twenty-five tents comprised the hospital proper, with a dispensary tent, and tents for the living-quarters of the staff. The soil was all the purest sea-sand, with thistles and scant grass; going barefoot was the universal custom, and, in our quarters, we of the staff used to follow that custom with great pleasure.

"The professional side of the work was of the greatest interest to me and every day was a pleasure. The clinics numbered sixty to a hundred patients a day. Of course, we had all classes of cases in medicine and general surgery, but, by far the larger proportion of our patients were eye-cases. Of the 252 operations that I did in less than seven weeks, 222 were for the eyes. This is the number of persons operated upon, most of them having more than one operation, perhaps on all four lids, so that I really operated upon 408 eyes.

"There were some cataracts, not more than would be seen in the same number of cases elsewhere, but, trachoma, and its consequences, accounts for almost all of the eye troubles in this land. I set out to treat these cases radically, and I secured fine

results whenever I could hold the patients long enough for a reasonable after-treatment. But, even so, the number of eyes that can be saved from partial and total blindness is large and the economic value of each eye thus saved is enough to make the prosecution of this line of work of the greatest importance for the redemption of the land.

"The accident-cases always are interesting. I had the last end of treatment of some cases of bombed hands, of which there had been quite a number in the earlier days. These were largely in children and were due to their picking up unexploded Turkish bombs that were lying in the fields from the time of the British advance in the Gaza region. Many fingers and even hands were lost from this cause.

"Vermilion was the great enemy we had to fight. Fleas hardly were counted as a problem, because we could do nothing against them—they were everywhere and inevitable—and, so far as we know at present, not being the carriers of any special disease, did not come within the hostility of a medical conscience. Lice and maggots were a daily terror. How many wounds and injuries came to us filled with maggots, I can not estimate. Among the natives, a favorite dressing for a wound is, a piece of raw meat—a regular breeding-place for maggots; and they can hardly be blamed for invading the adjoining premises. Many a child had to be put under chloroform, in order to search out and pull from their hiding places deep in the middle-ear a half dozen wriggling maggots whose every motion was causing torture to the innocent victim.

"A woman came to the clinic complaining of headache. A single sore on her face led to questioning, and, when she rather unwillingly undid her turban, she exposed an exaggerated case of impetigo, and every separate sore was as if the whole thickness of the scalp down to the bone had been punched out, and every sore was a nest of maggots. I removed 60 of them at the first sitting, and at the first dressing next day the nurse had more to do. The headache disappeared without further treatment. And these are not the most loathsome cases that we saw.

"Another great difficulty with which we had to contend was, the filthy habits of the people. In spite of our providing proper

sanitary facilities, we were compelled to have a scavenger go around every morning and clean up the filth from around the tents of the patients. The women were as bad offenders as the men. We made it a rule that anyone known to have violated these simple sanitary regulations must go without his dinner next day, and this proved quite an effective punishment."

THE COUNTRY-DOCTOR

The subject covered by the title of "The Country-Doctor" covers every branch of medicine. The country-doctor is supposed to look after the many and varied diseases, familiar as well as unfamiliar, common as well as uncommon, is expected to look wise, give a diagnosis, and to discuss, in a general way, the pathological conditions affecting both the normal and the abnormal physiological man. In this paper, I intend to follow the tracks and cover almost every phase of his daily work and what is re-



Before the Days of Automobiles.

quired of him, and what he must be to measure up to the standard of efficiency set for him by the public.

The country-doctor not only is a dispenser of pills, powders, and nauseous medicines, but, when occasion demands, he must also be a man "behind the knife." Antisepsis, both external and internal, should be the watchword of his everyday work. Correct conclusions and the knowledge as to how to arrive at them should be cultivated by him, for, how often do not we jump at conclusions without much thought, and, in the end, wonder why it was a given case did not terminate as we had hoped for. And, further, to quote our old reliable, but, now departed Doctor Waugh, "we insist that the country-doctor must not

treat diseases, but, patients, who are afflicted with certain anomalies of function or with certain diseased processes."

A careful examination should be made in every case, no matter how trivial it may seem. A correct diagnosis makes more easy a correct plan of treatment, one that will not disappoint in the effects designed and looked for. As all of our disappointments come from incorrect diagnosis, we should strive to know that a thing is correct; knowing this, we shall be less likely to suffer disappointment in our expectations.

Surgery, both general and minor, will require a part of the country-doctor's time, and there is no excuse at this advanced age of medicine for his not being as well qualified for general and special surgery as for the practice of medicine, inasmuch as his opportunities for learning are just as good in the one as in the other. However, there are presented many cases, both surgical and nonsurgical, that will go to the specialist, and the reason for this will be explained further on.

Minor surgery will take up more of his time than will general surgery. Scarcely a day passes but that he will be called upon to dress wounds or set broken bones, and he should know how to do this in a proper surgical way.

For many years, for wounds of the hand and face, that is to say, cuts and laceration, tincture of iodine and collodion have constituted my main dressing. I seldom employ bandages for minor wounds of these parts, nor for incised wounds in children. Cotton moistened with collodion will hold parts together for primary union, in the place of ligatures; and, when children get their fingers cut off, as often happens, with an ax, I dress them as I do other wounds and trust to nature for repairs. This gives much better results.

For shock occurring in very great accidents, there is nothing better than morphine with hyoscine. Preseding operation following accidents, when shock is feared and general anesthesia would not be thought safe, spinal anesthesia will be the anesthesia of choice to use for certain regions, as it is both safe and prevents shock. Indeed, I regard it as one of the greatest helps for the country-doctor in operating upon the genitourinary and rectal regions and the lower extremities.

Tumors, both malignant and benign, will demand his attention. Also, a part of his

time can be devoted to corns, bunions, birthmarks, moles, and, in the case of the ladies, to facial blemishes, pimples, and to the wrinkles of the older folk.

The mouth is the most important, the tongue is the great indicator; the teeth, the main masticators, are the most-neglected part of our anatomical makeup, and the country-doctor will be required to give some of his time to the consideration of the diseases that affect these parts. The extraction and cleaning of the teeth, the treatment of the gums and of the many other affections of the mouth can, and should, be part of his daily work.

The nose and throat likewise will need the attention of the country-doctor. Enlarged tonsils will need to be removed. In many cases, they can be removed with the tonsillotome; and, in the great majority of cases, that is all that will be necessary. Still, you will encounter some that will have to be dissected out; which, with the proper equipment, is both easily and safely done. I prefer the snare, as being the safest and most nearly bloodless. Adenoids can be removed at the same time.

Many times he will get patients, more especially children, who have kernels of corn, beans, cottonseeds, maggots, and many other foreign bodies in the nose, and he should be prepared and be equipped for their removal, as oftentimes snuff and pepper will fail to force them out.

The troubles of the ear are, perhaps, less understood by the country-doctor than almost any other branch of the healing art. However, being of one of the special senses, they demand of him at least a working-knowledge of this organ's anatomy and the diseases that will most likely call for his attention. Foreign bodies will have to be removed, and he should be equipped with something more than a hairpin in the way of instruments. A few whiffs of chloroform will aid wonderfully in their removal.

Injuries of the eye, and more particularly of the cornea, will demand prompt and energetic treatment in many cases, if the eye is to be saved. Removal of foreign bodies from the eye will often be required of him, and he should understand and be equipped for this work. I have seen many instances where attempts had been made by unskilled operators, to the detriment both of the patient and operator. Ulcers of the cornea should never be allowed to

rupture, for, by proper treatment, this accident can be prevented and an eye saved.

Pterygium should be removed by the country-doctor, as the operation is very simple and without danger.

Emergencies will occur when he will find it necessary to enucleate an eye because of injuries sustained, and this he should be able to do, as the operation is both easy and simple. It should be done under cocaine-anesthesia, he having in mind at all times asepsis of the parts and of the instruments. The first thing with me, after the examination of an eye, is, to make it as aseptic as possible; by using a 10-percent argyrol solution followed by flushing with distilled water.

Obstetrics goes hand in hand with country-doctoring and will cause as many anxious moments as will any other branch of



Dr. Bates and Two of His Neighbors.

the daily work. Properly to instruct and advise a woman for the lying-in period, merits a great deal of study and thought, and the carrying of her through this ordeal safely is a thing greatly to be desired and hoped for. The after-treatment and care both of mother and baby will require the same careful study. There are two kinds of accidents that go with obstetrics, namely, hemorrhage and lacerations. These, one may say, many times are unavoidable accidents. Not being familiar with and having no previous history of uterine myomas and other tumors, portions of retained placenta, and also a natural tendency often gives us an unlooked for hemorrhage.

Many times lacerations will occur, no matter how careful the attendant may be in his management of the case. Immediate repair should invariably be done, as we shall

get better union and results will be more satisfactory.

Gynecology perhaps can boast of more specialists than almost any other branch of medicine. Nearly every general practitioner, when he first hangs out his shingle, will have letterheads and cards with the euphonious inscription: "Diseases of Women and Children a Specialty." The country-doctor that is familiar with the diseases of women, and qualified to treat them, both medically and surgically, need not worry about having something to do, as his patients will do his advertising.

Genitourinary and rectal diseases will furnish a great number for his consideration, and will be of varied character, and, when he becomes familiar with this class of diseases and the work required and is provided with proper equipment, results will be most satisfactory.

The country-doctor should be qualified to treat hemorrhoids, anal fissures, and fistulas. There are available four operations for piles, but, only two need to be mentioned, namely, ligature and clamp. Both are simple and offer best results. I prefer the clamp as the easiest and as giving best results, with a minimum of danger.

Affections of the skin are, perhaps, more puzzling in arriving at a diagnosis than are the diseases of any other class that the country-doctor is most likely to encounter. The lesions occurring upon the skin are of two sorts, primary and secondary. The primary lesions are macules, wheals, papules, tubercles, tumors, vesicles, bullae, and pustules. Secondary lesions of the skin are such as exist either as a result of primary lesions or from other causes. They are crusts, scales, excoriations, fissures, ulcers, and scars. Unless we are able to place each disease in its proper class, disappointment awaits our efforts at effecting a cure.

Some skin diseases pass through many of these lesions, there being, the papule, vesicle, pustule, crust, ulcers, and scars. After-treatment of some of the most common is, sometimes, very disappointing after their passing from the acute to the chronic stage, in spite of all one's efforts at relief and cure, and we are told that there is one that the rich most envy the poor for, who seem to derive so much pleasure and joyful relief from scratching.

I have tried to present an outline of the country-doctor and what he should do as

I understand his position and practice myself. You will find, as a result of recent biological and chemical discoveries and other greatly improved methods, that surgery in all its branches has made wonderful progress, while many other branches of medicine also have suddenly developed, making hospitals and specialist so popular just now that many people actually imagine that the family-physician or the general practitioner, because temporarily obscured, is passing away and is about to follow the dodo and the buffalo.

Friends, believe no such folly; for, on the contrary, the family-physician stands at the chief gates, he, as a rule is the one first consulted; and there is much that can never be taken from him. Although he may just now be temporarily eclipsed, the days of his usefulness are only now beginning; for, the medical and surgical procedures that now require special knowledge and skill must and will inevitably become common property and everyday knowledge and part of his armamentarium, thus giving him more weapons and more power, and thereby giving the hospital-surgeon and the specialist less advantage over him. Thus we shall go on, ever advancing, with the other following, today, tomorrow, next year, without end.

Private hospitals and sanitariums, and the outfits of many country-doctors already show the entering wedge of this diffusion and soon but few patients will have to travel 50-100-500 miles to get standard or special treatment.

It is the business of the country-doctor to keep his eyes open and equip himself with whatever aids his best interests suggest, and to strive to excel in their use.

W. A. BATES.

Purdon, Tex.

CONE WAY TO COLLECT AN OLD ACCOUNT .

Brushing the snow from his shoulders and sleeves Doctor Otis stamped into his office as the old cuckoo-clock squawked eleven. After removing his coat and hat, he proceeded methodically to fill his medicine-case and to arrange his call-list for the next day. His actions were quick and certain; no time nor energy wasted on false motions. While so occupied, the annoying ring of the telephone disturbed him.

Sixteen hours of steady work had made him very tired. Would he answer it or not, or let his wife inform the person that he was not in? Again it rang. So, he grabbed the receiver impatiently: "Doctor Otis speaking." . . . "Very sorry, Humphery! I'll be as long getting there as you are paying my bill." . . . "Six months!" He slammed up the receiver and prepared to retire, when the telephone again interrupted him. He answered it as before. "Yes! For thirty-five dollars, cash! The old account and ten for tonight. You provide the transportation." . . . "My terms or nothing doing!" . . . "Very well. I'll be ready when the car arrives."

A half hour later, a limousine from the Boulevard Auto Service called for him. The wind was piling the snow into deep drifts, through which the Doctor waded to the curb and climbed into the car. He settled himself into the seat and was immediately asleep. The gears groaned complainingly while the rear wheels spun around, flapping the chains against the fenders as the machine slowly made its way through the streets. At the Humphery residence, the chauffeur awoke him. The maid, who admitted him to the house, informed him that Mrs. Humphery's condition was "very serious."

"Come right up, doctor," Mr. Humphery called down from the head of the stairs.

The Doctor did not reply, nor did he take off his coat or hat. Thinking that he had not heard, Humphery again called to him.

"Thirty-five dollars to climb those stairs," Doctor Otis called back.

"I'll pay you afterward," bargained Humphery, as he came downstairs.

Doctor Otis turned abruptly toward the door, but, Humphery grabbed his arm and expostulated: "Here is five, and five more when you go."

Doctor Otis accepted and put it in his pocket, then, taking out his callbook, he made an entry. "Five dollars credit on your old account. Six months at 6 percent interest—seventy-five cents," he drawled.

Humphery squinted. "I never pay interest—"

"Nor anything else," interrupted the Doctor.

Humphery hesitated, muttering to himself, then he fumbled over some change

and counted out seven dimes and five pennies which he handed to Doctor Otis.

"Umph! Guess your wife isn't seriously ill, else you would not haggle so much. Where's the ten for tonight's call?"

"I'll give you that when—"

Doctor Otis opened the door and went out, but, Humphery quickly followed him. "Doctor! Doctor!" he cried.

"If you waste any more of my time, I'll make it twenty," snapped the Doctor.

"Twenty!" Humphery's teeth chattered, but, not from the cold, "I'll pay ten."

They reentered the hall where Humphery took a roll from the inside pocket of his vest from which he counted off ten one-dollar bills. Then he returned the roll to his pocket, recounted the ten twice and gave them to the Doctor, who was about to demand the rest of the old account; only, his sense of medical duty overcame his business-judgment.

They then proceeded upstairs to where Mrs. Humphery, groaning quietly, was reclining on a lounge. "Oh! doctor, I'm so glad you came. I know I'm terribly injured!" she exclaimed hysterically.

"What happened?" inquired the Doctor.

"She stubbed her toe and fell on the sidewalk in front of Garrit's store," Humphery explained.

It required the united coaxing and combined efforts of the Doctor, her husband, and the maid to remove the shoe and stocking from Mrs. Humphery's injured foot, for, any attempt to touch it was the signal for an ether-splitting outburst of screaming and wailing, which the apparent seriousness of the condition did not seem to warrant. The Doctor took a pair of bandage-shears from his bag and informed Mrs. Humphery that it would be necessary to cut the shoe and stocking, if otherwise she could not bear the pain. To have spoiled that new shoe and silk stocking would have been criminal, and his patient "believed" that she would be able to endure the ordeal without having those items of wearing-apparel destroyed.

This eventually having been accomplished, the Doctor carefully examined the foot by alternately rotating it from side to side, then bending it backward and forward, this being accompanied by the most agonizing shrieks from the woman. No swelling, nor black-and-blue spot, nor evi-

dence of displaced or broken bone could he discover.

"For the night, just keep the foot and ankle wrapped in cloths wrung out of hot water," ordered Doctor Otis as he turned to leave the room.

"Are you going to put on a plaster-paris cast in the morning?" Humphrey queried anxiously.

"No. It is not broken."

"Well, it is badly sprained, isn't it?" Humphrey was more worried than before.

"No. There is no serious injury. Slightly wrenched, if anything. It'll be all right by morning."

"Confound it! I pay five, ten, fifteen dollars, and seventy-five cents and transportation, to learn that she isn't hurt, but, I'll sue Garrit just the same," growled Humphrey, pacing the room.

Doctor Otis ignored the remark and, after repeating his directions, quietly departed.

The next morning Doctor Otis' humor was not of the best as he glanced over his mail. It brought a letter requesting him to give an address before the Kilo Club on some phase of economics, on the following Saturday evening.

"Phist! The Kilo Club, and economics! That club has just one too many members," he grunted, tossing the letter into the waste-basket.

While making his daily calls, he stopped at The Alton R. Humphrey Company's offices. Ignoring an officious clerk presenting, he strode across the main office to the private one. Not being a slave to tradition and convention, he forgot to knock and entered unannounced. Humphrey looked up angrily at the intrusion and demanded, "How did you get in?"

"Look here, Humphrey, what are your business methods? Two percent discount for cash in ten days, net on thirty or sixty days' credit? Sight-draft in ninety days, and sue in four months?"

Humphrey's face was scarlet, "Yes, by thunder! What of it?" he roared, striking the desk with his fist.

"You've owed me twenty-five dollars for six months and ignored every statement. You would neither have sent for me nor have paid me last night, if you could have gotten any other physician."

"Oh, that's it," sneered Humphrey. "Doctors are a joke when it comes to

business. I never paid one before. Collect the balance, if you can!"

The Doctor's face broadened into something that resembled a sardonic grin. "Very well," he smiled and left.

As usual on Saturday evenings, all of the tables in the billiard-room of The Kilo Club were occupied. Doctor Otis was playing with a friend, while Humphrey wandered from one table to another, watching the players. Although a boy had announced that the president was about to call the meeting to order in the reception-room, yet, the members leisurely finished their games before they straggled in. Humphrey took a seat by himself in the rear of the room. As Doctor Otis entered, he whispered to a bellboy and slipped something into his hand, then the door closed quietly.

"The speaker of the evening needs no introduction," said the president. "Our esteemed medical member, Dr. Calvin R. Otis, will now address us on some phase of economics."

"Mr. President and Fellow members, there is no such a thing as an uncollectable account," Doctor Otis began abruptly. "There is a way to collect every account, but, it is up to the creditor to find the way in refractory cases. Dun! Dun by every conceivable method; by mail, by telephone, by collection-agencies, and by lawyers. Sue! Get execution of judgments. Get notes with or without security. Dun your debtor anywhere and everywhere you meet him. On the street, at church, in the bar or grill, at the club. The man who refuses to pay is unworthy of courtesy.

"For example, if you have a debtor, who refuses to pay your bill against him, by ignoring all statements, if such debtor has a big business and a bigger income, but, everything is in his wife's name, if he goes to dinner-parties and joy-rides, and is a member of your club, that man deserves to be exposed."

Humphrey stepped quickly to the door—the door was locked!

"Mr. Humphrey will now open the discussion," said the speaker.

A merciless laughter filled the room as the members showed their enjoyment of Humphrey's discomfiture, who swore as he glared at Doctor Otis: "No gentleman would use your method. Collect it, if you

can," and he started for the door at the other end of the room, but, the Doctor met him on the way.

"I know that you are so poor that you can not afford to pay what you owe me. I'll make you a present of a receipted bill and use my influence with the Commissioner of Charities to secure an order for groceries or a place in the almshouse for you."

"By thunder! I'm no pauper," stormed Humphery, as he pulled out a roll of bills and peeled off four five-dollar notes, which, after the manner of a man who has taken the last and deciding trick in a close game of pinocle, he slammed on the table. "There's your damned twenty dollars," and he strode from the room.

At the next meeting, The Kilo Club accepted Humphery's resignation.

EDDY S. HASWELL.

Albany. N. Y.

A NONSURGICAL TREATMENT FOR BONE DISEASE.

A young medical student, hopeless and in despair, wandered along the heaths of old England. The beautiful sunshine and twittering birds were unheeded, Surgeons, who were his professors, had repeatedly operated upon his shoulder-blade and ribs, without success. A vicious, virulent osteomyelitis, an infection of the bone into its very marrow, was unchecked. He was doomed, apparently, to follow his two athletic brothers. Both had succumbed, victims of tuberculosis. As he strolled along the country wayside, the rolling green suddenly gave way before his progress to a huge tannery. Half idly, weak, and worn by his exertion, the embryo medical man—watched curiously a strange frothy, emulsion-like bubbling upon the hides that were soon to become leather.

"What is that?" he asked the tanner.

"That is a method to rid all impurities from the cows' hide," was the reply.

"Does it enter the crevices, cuts, wounds, and open places of the animals' skin?"

"Yes. This watery solution is applied to the skin and it removes all decay, decomposition, and putrification. It not only helps to preserve the skin, but, it makes the hide softer and more vigorous."

"Well, if it does that to cattle and hides, and I'm doomed to die, anyway, will you

sell me a gallon, to try on my own sores and wounds?"

The tanner laughed and consented, adding, "It has never been used on man either as a medicine or a poison."

Young Pridham sedulously soaked the stuff on his running sores until it burned him to the bone. But, in six months he was well, set sail for America, and entered the employ of the Westinghouse Electric Company, where for ten years he gave himself up to mechanical employment. He had forgotten all about his student days, his bone-tuberculosis, and all else—only thought of making a living.

One day, in swimming with Prof. N. M. LaPorte, engineer and inventor, and graduate of Purdue University, the healed scars attracted the Professor's attention. Pridham told him all about it. Professor La Porte became interested enough to send Pridham back to England, to ship him a barrel of that mineral solution. When it arrived, it was analyzed and discovered to be a solution of a mineral oxide unused by medical chemists and unfamiliar to physicians or pharmacists.

Professor La Porte thereupon began a series of investigations, trials, and experiments, which have extended over the past ten years, with a personal outlay on his part of upwards of thirty thousand dollars. In this period without pay, he has treated and healed more than seventy-five children and grownups afflicted with infections of the bones, which surgeons and others had given over to him after amputations and repeated operations had failed to limit or check the inroads of bone-tuberculosis and its allied invaders. A man of wealth and of great humanitarian principles, Professor La Porte has established a sanatorium devoted exclusively to the treatment of bone diseases by this new method. The Cincinnati Hospital and other institutions also expect to use this method soon.

In plain terms, this simple, inorganic mineral, never before used in medicine or surgery, is a harmless, nonpoisonous oxide similar to rust, which is an oxide of lime, that is, oxide of calcium. After the correct dose for the particular kind of bone disease is determined, it is applied, dissolved in water, under a rubber sheet, to keep the parts moist. Immediately a bubbling emulsion of tissue waste and disease-germs gives evidence of the oxidizing ac-

tivity of the poultice. Microbes and bacteria, the bacilli of tuberculosis or of septicemia are literally destroyed and driven out of their hidden nests.

The mineral solution is really a modern antiseptic poultice, cleansing and disinfecting, exploratory and healing, instead of dirty and temporary, such as the ancient uncertain flaxseed poultice. It acts by oxidizing—burning away—all impaired and diseased tissues, while it simultaneously stirs the healthy fabric to germinate and heal from the innermost recesses.

The method consists, briefly, in destroying the germ of the disease by oxidation, the oxygen for which is generated from the external application of a poultice-like mass containing chemicals that release oxygen by possibly "osmotic action," which penetrates even an unbroken skin. The effect of this method of treatment is, to bring the germs to the surface, where they are destroyed, and also to facilitate the entrance of the germicidal agent to the affected parts by scraping, chiseling and curetting and subsequently packing the

cavity thus created with an antiseptic paste or gauze.

Surgery rarely cures the disease, largely because it deals with the effect of the disease and does not effectually reach or eliminate the cause; and it has been repeatedly found that, extending to a considerable distance around the affected parts, are a number of sinuses or channels containing active noxious germs.

As soon as the antiseptic properties of the packing become active, resulting in a recurrence of the disease, necessitating further operation, each subsequent operation involves further loss of bone, until amputation is finally necessary. Many times amputation becomes imperative, to prevent the infection spreading and causing general septicemia.

Such a remarkable record has demonstrated beyond all doubt this method of curing a class of what had heretofore been regarded as incurable diseases.

L. K. HIRSCHBERG.

Baltimore, Md.

OPPORTUNITY

THHEY do me wrong who say I come no more
When once I knock and fail to find you in;
For, every day I stand outside your door
And bid you wake, and rise to fight and win.

Wail not for precious chances passed away,
Weep not for golden ages on the wane.
Each night I burn the records of the day;
At sunrise every soul is born again.

Laugh like a boy at splendors that have sped,
To vanished joys be blind and deaf and dumb;
My judgments seal the dead past with its dead,
But never bind a moment yet to come.

Though deep in mire, wring not your hands and weep;
I lend my arm to all who say, "I can."
No shamefaced outcast ever sank so deep
But yet might rise again and be a man.

Dost thou behold thy lost youth all aghast?
Dost reel from righteous retribution's blow?
Then turn from blotted archives of the past
And find the future's pages white as snow.

Art thou a mourner? Rouse thee from thy spell;
Art thou a sinner? Sins may be forgiven;
Each morning gives thee wings to flee from hell;
Each night a star to guide thy feet to Heaven.

Walter Malone.

After the World War

LETTERS FROM FRANCE—VI*

M. Clemenceau, France's ironhearted premier, has publicly and without solicitation placed the stamp of his official approval upon the work of the Y. M. C. A. overseas. In the course of a recent celebration, in Saint-Mihiel, for the purpose of commemorating the occupation of that town by the Allied troops after four years under German rule, the "grand old man of France" singled out F. G. Randall and H. C. Culbertson, president of Ripon College, Ripon, Wisconsin, from among the cheering crowd that had assembled in front of the city hall and left a procession that he headed, to praise to them the Red Triangle.

M. Clemenceau shook hands with the two Y. M. C. A. workers and said to them with great earnestness: "We greatly appreciate the work you are doing. Our hearts are full of gratitude; our hearts are with you."

Miss Florence Bullard, American Red Cross nurse, has received a glowing citation for her work in France, this carrying with it the right to wear the Croix de Guerre with bronze star. The citation reads:

"Miss Bullard is a nurse whose efficiency, devotion, and bravery have won general admiration. Ordered to Soissons at the beginning of 1918, she showed the most imperturbable sang-froid under the entire violent bombardments of March and May, searching, in spite of the danger, for the wounded to assist and comfort them. During the operations of July 15 and August 5, she showed the same spirit, devoting all her strength to the care of wounded. Her attitude was especially brilliant during the night of July 31, when bombs burst quite near the outpost."

Miss Bullard is a graduate of St. Mary's Hospital, Rochester, Minnesota. Her home address is Glens Falls, New York. Accompanying the citation, is a letter to the

Paris Red Cross Headquarters, from a commander in the French Army, under whom Miss Bullard served, which reads:

"I take the greatest pleasure in handing you the splendid and well-deserved citation of Miss Bullard, American Red Cross nurse at Evacuation Hospital 13. I beg you to accept the most sincere congratulations of all the doctors in the hospital on the untiring devotion Miss Bullard and her American colleagues, Miss Heath and Miss Ross, have shown to our French sick and wounded men. The noble character of these nurses, the unassuming and touching manner in which they cared for our soldiers deserve at once respectful admiration and our friendly gratitude."

The outstanding feature in the August report of the Red Cross activities is, the great increase in the service for the troops. The canteens have done an enormous amount of work in serving 860,000 men. One canteen alone served 129,000 hot drinks. Doughnuts, sandwiches, and more substantial foods are served with coffee and chocolate.

The metropolitan canteens served more than 330,000 French and American soldiers, during the month, and 44 posts in the army field since distributed 515,000 hot drinks as well as other comforts.

Another great increase is to be noted in the home and hospital work, as more than 10,000 letters have been received and answered regarding missing men and details wanted either by relatives at home or by men here. The number of hospital-recreation-huts has been increased by seven, thus making a total of seventeen.

In the field civilian relief-work, the Red Cross is now operating 72 dispensaries in big cities or in the villages that are without doctors, near the front. These dispensaries and hospitals treated, during August, 34,250 patients, 25,00 being children.

*It should be remembered, on reading this interesting letter, that it was written in wartime, before the signing of the armistice.—Ed.

The educational exhibits designed to combat infant mortality and tuberculosis

have been attended, within the month, by 380,000 people.

Workers of the Red Cross garage in the American zone, in a series of thrilling night expeditions close to the front have been rescuing furniture and household goods abandoned in the hurried evacuation of last spring.

The refugees from these towns, unable to get together enough new goods to live decently, appealed to the "Prefect" for permission to recover their property. The permission was granted, on condition that transportation could be found, so, the Red Cross, through its drivers, who voluntarily assumed this task in addition to their regular work, offered the use of several camions.

The rescue of beds, linen-chests, and old wardrobes is much more exciting than it sounds. Many of the evacuated villages lie at the mercy of the German guns, and the town where most of the work has been done, a once thriving city of 15,000 inhabitants, is only 1,200 meters from the lines.

Every one of its houses has suffered from shellfire; is exposed to attack by artillery, by gas, and from the air, and, by army-order, no camions are permitted to enter any house, except under cover of night. The bridge that spans the Moselle River, being in full view of the German trenches, cannot be crossed by camion and, so, the little fleet of Red Cross trucks had to divide forces at a bridge several kilometers downstream and enter the town from both sides. What took place when they arrived at the town, one of the drivers, a New Englander, describes as an "evacuation-bee".

Every one pitched in and helped. The men from the other cars ran across the bridge on foot, hugging the shelter of the parapet, and several French civilians, who had been allowed back to help pack up, joined us. The German shells were screaming overhead, but, we could not make a noise or smoke a cigarette, for fear of drawing their fire.

One night, they did run into a bunch of gas and had to work with their masks on, and dark—you could not see your hand before your face, except when they sent a star-shell up from the lines, and then you could see to read. When they sent up red ones, it looked as if the whole town

were on fire. There is not much left upon the place, anyhow, but, they pulled camion-load after camion-load of good stuff out of the wreckage, and the gratitude of those poor people was immense.

When the trucks were loaded, they took the goods down to a railway station several kilometers away. There, the furniture and other rescued materials were put on cars and taken to a point where they could be claimed by their owners. The work in this particular town having now been completed, the Red Cross camions are at work on the same errand in smaller villages comparatively far from the front.

Influenza, the grip, or "Spanish flu" again had the honors of discussion at the Academy of Medicine on Tuesday.

In view of the extension of the present epidemic of influenza over the greater part of France—a progress which it is dangerous to dissimulate and absurd to exaggerate—the government requested the Academy to appoint a special committee to take measures against the malady, which is largely responsible for the increased number of funeral-processions observed every day in the streets of Paris as well as in the suburbs.

The Academy has appointed on this committee such eminent medical authorities as Doctors Chauffard, Achard, Vincent, Netter, and Bezancenon, men whose reputation is international and who are better qualified than any other scientists in the world to fight the insidious scourge that is now rampant in nearly every quarter of Paris.

During the meeting, the Academy considered a communication, presented by Doctor Achard, on the presence of bronchopulmonary spirochetosis in the present epidemic. Another communication, one from Doctor Patein, dealt with the chemical analyses of blood and other fluids from victims of grip. These analyses revealed the presence of surprising amounts of urea. This is regarded as evidence of denutrition, or of a kind of intense autocombustion, of which other symptoms are the patients' very high temperature and the rapidity with which they become emaciated. With regard to this rapid emaciation, some authorities advise the superalimentation of the sufferers, notwithstanding their feverish condition.

Doctor Netter, who has made a special study of influenza ever since the terrible

epidemic of 1889-1890, when people perished by thousands, stated yesterday that, when the present form of influenza first appeared last spring, it manifested no particularly grave characteristics. An attack generally lasted only a few days, the chief symptoms being intense pain in the head and limbs and a feverish temperature. Since last August, however, numerous complications of a virulent nature have developed, including acute bronchitis, suffocation, catarrh, pneumonia, and pleurisy.

The present epidemic is particularly contagious. It attacks members of the same family, while the persons nursing the patients are extremely liable to be stricken.

The treatment varies according to individual cases and can be determined only by the physician attending a given patient. When an attack of influenza occurs, the victim should remain indoors and send for the doctor immediately.

In the tremendous amount of construction that has been carried out for the American Army within the last year, there is nothing so wonderfully interesting as the huge salvage-plant near Tours. No army in the world has anything like it, and not a day passes that representatives from some of the Allied Governments do not inspect it and take notes upon its method of operation. It has saved, not thousands, but, millions of dollars for the United States Government. It has been described, in a general way, several times in *The Herald*, but, it is constantly increasing its work, so that new details are worth mentioning.

Not a scrap of anything is wasted. Beautiful hospital-slippers are made from old campaign-hats that have been discarded. The question has often been asked as to what became of these hats. They are of a splendid quality of felt, and no matter how old and worn they are, the felt is utilized in the soles of the slippers. The uppers are made from old woolen garments thrown aside as absolutely beyond repair.

The overseas caps are another specialty made from old uniforms unfit for repair, and brassards are manufactured by the thousands for the various army services. Old garments are dyed green and marked "P. W.", to be used for the German prisoners of war. The old trench-shoes that have been mended and are beyond more

repairing, are cut up into shoestrings. No matter how worn the shoes may be, there always is a piece of leather left in the uppers big enough to make several pairs of shoestrings from.

The shoe-department is one of the most important. Shoes and boots are brought in by thousands of pairs. They first are washed and disinfected and sorted and then given out to be repaired, greased, inspected, and again packed for shipment. The production in this branch is about 3,500 pairs per day. The total value of the output for the month of August was \$449,599. About 80 percent of all shoes received are repaired. New machinery is constantly being added to this department, and when it is completely organized it is expected that 7,000 pairs of shoes will be turned out daily. At present, this branch employs 2 officers, 7 noncommissioned officers, 114 enlisted men, and 280 male and 249 female civilians.

The depot has seven operating-departments: Laundry, clothing, shoes, rubber goods, harness and leather equipment, canvas, and webbing and metals. The laundry alone employs 206 workers, over half of whom are civilians. All sorts of new devices in machinery to save hand-labor for washing, rinsing, and drying are used, and more than 75,000 pieces are turned out a day.

That of clothing is probably the most important department. Its production is limited almost entirely to breeches and blouses, underwear, bedsacks, and blankets. The daily output is 10,000 woolen breeches or blouses, 25,000 garments of underwear or bed-sacks, and 500 blankets.

After coming from the laundry, the garments are examined and marked for repair or, if not reparable, they are cut up for patches. The patches necessary for the reparable garments are cut entirely from the unrepairable ones (15 percent of the total) and then sent out to the various branches for the actual sewing, after which they are classified either for reissue to the troops or labor battalions. About 1,600 women are employed in this branch, and 75 men. The value of the production for the month of August was £2,040,831, more than \$10,000,000, while the operating-costs were \$93,432.

The rubber-goods branch also shows remarkable figures for saving. It handles, primarily, rubber boots and "arctics",



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First Aid at the Firing-Front.

"slickers", ponchers, and shelter-halves. It produces about 3,000 garments and 850 pairs of boots a day. The great feature of the department is, the new vulcanizing-machine recently put into operation and which has proved most effective in the method of patching. Its personnel numbers 341, principally women.

The harness-department repairs all the old pieces of harness brought in from the battlefields. Then, after being sorted out, the French harness is returned to the French army and the British harness to the British army. The chief items are complete sets of harness, of which about 1,000 are turned out weekly, and saddles, of which about 700 are turned out weekly. About 150 women and 50 men are employed in this work, and the value of the monthly production amounts to \$315,453.

The canvas-department handles leggings, haversacks, canteen-covers, cartridge-belts,

medical packs, waist-belts and other small equipment-articles. It turns out, daily, 5,000 canvas articles and about one carload of burlap sacks. Its production in a month totals about \$22,878 in value.

The total value of production for the month of August was over three million dollars (\$3,246,588), while the cost of production was \$315,013; the percentage as compared with the value of the output was 10 1-4 percent.

The actual salvaging-operations of the depots started last January with 5 officers, 6 enlisted men, and 6 civilian employees, while at present about 10,000 persons are employed. The results show that the depot not only is saving a large volume of transport, but, 100 thousand dollars a day, and the officers in charge say that they expect to double the work.

B. SHERWOOD-DUNN.
Paris, France.

Just Among Friends

A DEPARTMENT OF GOOD MEDICINE AND GOOD CHEER FOR THE WAYFARING DOCTOR

Conducted by GEORGE F. BUTLER, A. M., M. D.

Society and Solitude

LET me venture to offer for the reader's consideration a few suggestions upon society and solitude, in the form of notes by the way, hazarding the promise that in proportion to our interest in life itself will the study of the theme engage our best thoughts and reflections.

What is society? Wherein lies the subtle charm that binds us to our fellow creatures in the world at large, permeates with its vitality and hope the body politic of our republic, links us indissolubly with the remotest nations of the earth, and, blended with the divine instinct of human affection, renders forever sacred the associations and memories embalmed in the idea of home? Shall we degrade its name and import, limiting its sphere to the private theatricals of a drawingroom; to a multitude of dainty nothings, uttered only, to tickle the ear and leave us poorer than ever? To a brooch, a glove, the latest genteel gossip, the conversation at an afternoon bridge-whist party—the dryrot of social intercourse? Of such inanity, one is reminded in its first interview, as created by George Elliot, between Grandcourt and Gwendolen, and the author's caustic remark, "Then commenced what is called conversation." No, to a nobler category of thoughts and feelings, to a higher plane of action, must we assign, in its finest sense, society.

In its purity, society is the embodiment of that inward longing of the heart which calls us from our lonely hearthstones to seek communion with the outer world; to test our theories of life and, through the medium of brave sympathies and the advantage of a deeper acquaintance with the excellence and the follies of mankind, see revealed to ourselves our own virtues and shortcomings. Upon the very threshold of society, we should assume a modest confidence, accepting as final the lessons of experience, however closely they may be brought home to us. Doubtless there are

few occasions more mortifying than the sudden discovery in the presence of superior intellect and force that we have overestimated our worth. Everyone guards within a retired niche of his heart's chapel the pleasing assurance that he is not wholly unimportant as a factor of mankind, and the revelation that our pet theories and deductions, drawn from what we fancied had been a careful study of our fellowmen, are, after all, erroneous, is little calculated to awaken in an ordinary mind better feelings than those of disappointment and regret.

The chagrin arises mainly from the fact that we have been worshipping false idols in attaching undue importance to private doctrines. It is this morbid self-consciousness, this want of humility in our desires consequent thereupon that obtrudes at every step our own selfish personality, that gives to society, in most circles, the aspect, not of a generous conflict between inspired men and women, but, of a paltry skirmish wherein each individual hides behind a shield of triple defense the foibles that must not, on any account, be disclosed to the enemy.

Yet, the instincts of human nature are keener than our strategy, and, in the long run, every man finds the level to which his faculties elevate or degrade him. Let us, however, but stand bravely in the presence of others, with the beam of sincerity in our eyes and the message of truth upon our lips, seeking only to know and to be known, filled with the genial warmth of love and charity, and instantly society acquires a new character and more stately proportions. We no longer are conscious actors in a petty drama, a conventional farce; the faces and actions of those around us become ennobled and the air we breathe is transfused with kindness and grace. Persons whom in our exclusiveness or haste we have wrongly classified, according to our narrow standard of human excellence, develop richer forms

and qualities and we are confounded with our own stupidity.

A distinguished American writer tells us of an English visitor who complained to him that in his rural village at home there was really nothing of interest, no one remarkable for intellect or power, and he adds thoughtfully that the very man he had sought with such ardor was, probably, living next door to him. In an unpretending country town, I have often watched the face of a certain railway official and marked in his conduct the strange want of delicacy, the ignorance of manners—alas, not infrequent in American characters!

I once was indignant with him, seeing a grayhaired man publicly shamed, by his rudeness, for a pardonable oversight in the purchase of his ticket, thinking to myself: "Well, this man is honest and perhaps, uncouth as he appears, he serves his part in the economy of his race, though of such can not be the "kingdom of heaven." A few days afterward, I saw from the morning train bound for a distant city a handkerchief fluttering and, in answer to its greeting, an aged mother watching intently the receding figure of her son, and I found upon examination that each day this act of parting veneration was renewed. In a moment, the boor became a hero. Here were poetry, feeling, filial affection, that should lighten during an anxious day the yearning solicitude of that mother's thought. And, from another window, I have often seen a hand grimy in the exercise of a terrible profession waving a bunch of engine waste to the wife and child who stood awaiting the godspeed. Are not such examples a rebuke to us? And, are we not led by them to this conviction, to me the crowning lesson of society, that we are oftener deceived in our evil than in our good opinions of others?

Again, I might tell you of a certain man, now bowed with years, who at the age of twenty wrestled with one of the most frightful forms of mortal temptation, and for upward of half a century this poor shoemaker has heard the voices of ministering angels proclaiming his triumph, till his gray hairs seem like an aureole about his venerable head. And all of us have witnessed these instances of dignity and merit in those whose outward appearance and circumstances offered

little interest to a careless observer of men and manners. They teach us that virtue resides in humble places as well as in the minds of the exalted, appealing to us to forego our shallow judgments of mankind, to look deeper into the heart of society, and gather strength, and confidence in each other, from the undying gleams of truth and honor that illumine the obscurest paths. Nay, more, we are led by the contemplation of society, in its amplest sense and import, to recognize that it is synonymous with humanity: for, it is not in the conversation, however admirable; it is not in the wit, the elegance, the taste, the witchery of the dance, the wooing whispers of music and art: not in these lie the charm, the secret fascination which draw a contemplative spirit to seek comfort in the company of others. It is in the universal instinct of humanity, the uplifting consciousness of mortal brotherhood, like that which inspires the verse of Terrence: "I am a man from nothing that is human alienate."

So firmly rooted in our nature lies this beneficent principle of mutual dependence, that hermitage seems impossible to a healthy, vigorous intellect. Notwithstanding a hundred disenchantments, we return, like prodigals, from the wastes of bitterness and isolation to the old faces, the familiar haunts that have before shed lethe upon our troubled lives. Even the venom we have nurtured, when betrayal darkened for us the lovely vistas of the soul's hope and faith, is changed to healing balsam by the renewal of a friendly smile or the touchstone of confiding assurance. We are shocked that we could have regarded with indifference the wealth of goodness, of purity, of love that encompassed our little measure of life, and we turn with firmer vows of fidelity to the warm sympathies that only await our behest to be called into generous activity.

Yet, the forces which pervade the living world about us come to us often unbidden and, through secret avenues amid whose green arches dwell silence and forgiveness, become our protecting nemesis. Let a man be never so broken on the wheel of fortune; let the anguish of the heart's bereavement sweep over and subdue him and the sunlight wound and the carols of birds awaken in his imagination only that deathlike sense of *unreality* that

is the soul's most poignant pain—the touch of a child's soft palm laid joyously and confidently in his own, the notes of a cherished song falling upon the stillness of his woe like an unearthly greeting, or the innocent laughter of one whose days should know no sorrow will quicken in his being the springs of gentler feeling and elevate his weary consciousness into a serener, nobler atmosphere. So long has he toiled to gather his poor bundle of faggots, and, lo! at the fireside of mankind, he may sit and partake of the most bountiful of human cheer. Unhappy is he to whom such tokens of divine compassion bring no peace, who can not joyfully respond to the unseen visitants of earth or own the blessed thrill that wakens with the pressure of a friendly hand! To such a one, indeed, all is mockery and ruin, society "stale and unprofitable", and the grandest energies of mortals only the fever of pitiless unrest.

Perhaps no benefit to be derived from social intercourse, considered in its amplitude as I have indicated it, is comparable to the abiding trust in human nature developed by an intelligent survey of the motives and passions that sway mankind. As our insight becomes deepened by experience and wise interpretation, we learn to comprehend more justly the finer play of feeling of which all classes of men and women are capable, should the magic sesame ever fling wide the doors of higher emotion in them. As an instance of this latent virtue (too stilled), here is an episode in a conventional drama I witnessed played some time ago.

I refer to the play "Fairfax," in which the heroine is doomed to suffer what Mr. Mill, in his "Subjection of Women," calls "the sad irony of life," being wedded to a brutal husband whose passions, long since estranged from their natural object, have plunged him into an abyss of degradation and shame. Even the thought of his dying child can not rouse him from the torpor of his moral obliquity, and in a moment of fiendish wrath he attempts to wrest from his pleading wife by force the means of her support and of the child's salvation which chance has brought to her. In the struggle which ensues, the weapon which he directs against her is, through the benevolent resources of modern melodrama, accidentally turned against himself, and its discharge terminates his besotted life. Filled

with dismay, the wife flees southward, appearing, in the following act, under an assumed name, as governess in a wealthy family residing on an impossible estate situated on the banks of the St. John's River of Florida. Here, the heir apparent falls madly in love with her and she is sorely pressed to conceal her identity, which poverty and still more a genuine affection for her suitor persuade her to attempt. A stranger appears, who, being well acquainted with her previous history, including the fatal encounter with her husband, hastens to warn her of the duplicity of her position toward his friend her lover; and finally a still further disclosure reveals the secret she struggled to hide—less from motives of policy than from the overmastering passion which has assumed control of her womanly nature. Then follow the bitter reproaches of her betrothed and the misery of finding herself discarded by the friends of yesterday, who lose no occasion to augment the intensity of her grief by the most heartless contumely and scorn. Distracted by conflicting emotions, the poor woman sinks under a weight of private agony. Finally, having recovered her self-possession, she determines to address a letter to her lover, containing a full confession of the catastrophe which has blighted her fondest hope. The whole scene, by the way, has been admirably treated, the situations being highly dramatic and replete with unaffected power and simplicity. And now comes the moment to which these necessary details have conducted us.

With averted face, the woman offers him the declaration which is to free her character from the stain that fate has cast upon it, while the circumstances therein related, she well knows, may only serve to confirm the suspicion of her crime. Taking the paper from her hand, the man simply asks in a voice of mingled sternness and affection whether it includes any record of guilt, and this her consciousness of innocence prompts her to deny unequivocally. As he turns from her, all his doubts are merged in manly magnanimity and trust, and the climax of his faith is reached when he silently holds the unread confession in the flame of a taper and calmly watches the burning of the confession that has so humiliated her.

Instantly a tempest of applause burst from the house. One almost could feel the pulse of the delighted audience as it re-

sponded to that irresistible transport. But, most interesting to me and that which bears more directly upon our subject was the fact that the first outburst of approval came from the gallery: not from the jeweled palms of luxury and pride, but, from the stenographers, the clerks, the shop-girls, the servants, the newsboys, and the sad company of those to whom life has much of tragedy and shame. That single noble impulse in them bespoke the universality of the affections, the instinctive recognition of honor and truth that will never fade while human hearts endure. It was the one touch of nature that makes the whole world kin, which, to him who cherishes true reverence for mankind, is more eloquent than the drama itself and makes society possible even among the humblest and poorest of us all.

From these instances, we deduce the reflection that our opinions of others are only relative, being subject, always, to the degree of insight which education and knowledge of the world confer. It is never safe to predicate of fellow men what they are or may be; at most, we may utter the impressions we receive from their language and address, assuming that there is yet a possibility of something greater than we recognize in them, to which they would rise should occasion call for its display. The heroes of all ages, the inspiration of all transcendent epochs in the world's history and the uncomplaining martyrdom of daily life that commands our admiration wherever we turn to examine the elements of society attest this supreme fact. To weigh humanity with the justice of a Portia, to put yourself in his or her place, to consider no man or woman too mean for sympathy and care, these are the dictates of wisdom in dealing with the world.

I remember well the pleasing surprise I felt one night in a "cow-camp" in old Indian Territory, listening to a cowboy chanting this sweet song:

Think of all the affectionate fidelity with which Livingstone's savage Makololos clung to him in those African wilds, when from commiseration for their condition he would go forward alone! Alfred Wallace, in "Natural Selection," relates of the Santals of upper Tartary, that they traveled

three hundred miles on foot to pay a debt of honor to the British rajahs, though the obligation could never have been enforced; and we learn of a race inhabiting Ceylon among whom falsehood is absolutely unknown. These examples might easily be multiplied, as the best books of travel evince. They are but illustrations of a central truth, namely, that conversance with society in its relations to humanity is to be regarded an inestimable privilege in its tendency to inculcate faith in our fellow men.

I think we should look with delight upon the glad faces of children, mindful of the soul's promise in them; the vicissitudes of maturity are but the reflection of our own griefs and pleasure; and he who reverences not age from instructive veneration for experience has learned little of the solemnity and grandeur of life.

Limiting the scope of our subject to its more immediate significance, it is to be regretted that so frequent an obstacle to the simple relations upon which all healthful society is based is found in our hopeless longing to be understood. This jostling with agreeable company, those multitudinous acts of conventional courtesy, the talent and imagination, the coquetry and grace, which are, as it were, the peace-offerings, the milk and honey with which social enjoyment entices us, are, yet, unsavory compared with the priceless boon of being taken at our best, be it only by one kindred heart among mortals.

Philosophy whispers to us the comforting assurance that to be great is to be misunderstood, that all the wisest and noblest in all times have been falsely estimated by their own age. But, bringing the maxim down to our own quiet circle, we are distressed by the discovery that the converse of it is very far from true and that to be misunderstood seldom means to be great. The foundation of this familiar disappointment doubtless would upon analysis, be seen to rest upon human vanity. It is the ghost of that hydra-headed self-consciousness, that morbid, decrepit introspection which afflicts the thought the manners and literature of our century.

(To be continued)

Among the Books

JACOBY: "UN SOUND MIND AND LAW"

The Unsound Mind and the Law, a Presentation of Forensic Psychiatry. By George W. Jacoby, M. D. New York: Funk & Wagnalls Company. 1918. Price \$3.00.

At variance with the custom of centuries, dealing with insane persons should be primarily not a legal but a medical problem. This is so because the insane are not normal people to whom the law can apply without suitable adaptation. It is true that legal restraint is necessary in the case of insane persons since these are prone to commit acts usually involuntarily or, at any rate, without deliberate premeditation, that endanger the wellbeing and even the life of their fellow-beings. However, legal restraint in such case is neither curative nor preventive. It is merely an ancillary means for the application of remedies undertaken either for the restoration of mental health or for the purpose of preventing the incurably insane from injuring themselves or others. This should be recognized by those in charge of the mentally unsound.

The author of the book before us calls attention to the disproportion between the more recent advances in psychiatric medicine and the conservatism or stagnation that exist in English and American laws in the same field. The author claims justly that the science of medicine must constitute a logical basis for every treatise on juristic psychiatry, for, the medical facts alone are stable, even if their scientific recognition may be uncertain and may vary with the lapse of time. Legislation, however, always is subject, necessarily, to relatively arbitrary and, often, illogical changes. In the nature of things, it should adapt itself to the science of medicine, a contrary procedure being ill-advised and productive of serious results.

"That psychoses do not differ from other diseases, that they are usually conjoined with states of bodily disorder, and, conse-

quently, that insane-asylums are nothing other than hospitals adapted to the special requirements of patients suffering from diseases of the brain and nervous system, constitute fundamental truths which must become part of every person's knowledge. Not until these truths are generally recognized will the final prejudice disappear against those who are mentally disturbed and against the asylums for the insane; and only then will the relationship between jurisprudence and psychiatry be of a more intimate and harmonious nature." (From the Preface.)

For these reasons, neurologists and psychiatrists and, indeed, all medical men, owe it to themselves and to humanity to correct and counteract the erroneous conceptions still existing concerning mental disorders and to bring about a just understanding of these affections as the only means by which a proper estimation of the medicolegal problems affecting the insane may be arrived at. This, the author declares, was his chief incentive in writing his treatise.

In the first main division of the book, the general relation is dealt with that jurisprudence bears to psychiatry, considering more especially (in addition to simulation and dissimulation and the self-accusations of the insane) the various degrees of responsibility and the significance they bear to civil and criminal procedures. The second main division is devoted to psychiatric expertism and describes the manifestations by means of which the most important psychoses and neuro-psychoses may be recognized. The third part is devoted to a consideration of hypnosis and anomalies of sexual sense, while the fourth and last part indicates the manner in which written or verbal expert opinions are to be formed or rendered.

It was manifestly impossible for the author to write a book on these subjects that might be easy to read; indeed, it requires careful and detailed study since the problems involved are difficult to say the least. The outstanding claim of the author which

should be accorded general recognition and for which every physician should raise his voice and contend as much as possible, is the accepted view among modern physicians that the insane should be regarded in the same way as persons who are physically sick; except that in the one instance, the lungs, kidneys, stomach, heart, etc., are implicated, while in the other it is the brain and nervous system that are particularly affected.

Doctor Jacoby's book deserves to be studied and consulted by all physicians who ever come in contact with the mentally unsound or who may be called upon to testify in court on psychiatric problems. It is a concise and excellent exposition of the subject, a veritable *multum in parvo* in one branch of forensic medicine.

JORDAN: "BACTERIOLOGY"

A Textbook of General Bacteriology. By Edwin O. Jordan, Ph. D. Fully Illustrated. Sixth Edition, Thoroughly Revised. Philadelphia: W. B. Saunders Company. 1918. Price \$3.75.

Jordan's textbook on bacteriology has quickly become a great favorite as is evidenced by the necessity of issuing revised editions in such rapid sequence. In accordance with the constantly increasing knowledge concerning pathogenic bacteria, the present edition contains a virtually new chapter on the pneumococcus, this having been entirely rewritten; while that on meningococcus is extensively revised. We can only repeat what we have said before, that Jordan's book is one of those that present the subject of bacteria and other disease-producing microorganisms in an interesting and clear manner.

MALLORY AND WRIGHT: "PATHOLOGICAL TECHNIQUE"

Pathological Technique: A Practical Manual for Workers in Pathological Histology and Bacteriology including Directions for the Performance of Autopsies and for Clinical Diagnosis by Laboratory Methods. By Frank Burr Mallory, A. M., M. D., and James Homer Wright, A. M., M. D. Seventh Edition Revised and Enlarged With 181 Illustrations. Philadelphia: W. B. Saunders Company. 1918. Price \$3.75.

Mallory and Wright's manual really is too well known to require extensive discussion.

It is without a doubt *the* favorite with laboratory workers and those having to perform autopsies. The fact that a new edition is available will be glad news to many who have desired to secure this splendid manual. At any rate, it is a great source of satisfaction to the Reviewer who has for long relied on the book for much dependable information.

DE LEE: "OBSTETRICS"

The Principles and Practice of Obstetrics. By Joseph N. DeLee, A. M., M. D. With 949 Illustrations, 187 of Them in Colors. Third Edition, Thoroughly Revised. Philadelphia: The W. B. Saunders Company. 1918. Price \$8.50.

A new edition of DeLee's textbook of obstetrics can not but be of general interest and necessarily must be welcome. There is nothing of moment to be added to earlier discussions of the work. This is one of the leading treatises on the subject and may be considered as presenting in an authoritative manner the best that is known concerning the principles and practice of obstetrics.

LIPPITT: "PERSONAL HYGIENE"

Personal Hygiene and Home Nursing: A Practical Text for Girls and Women for Home and School Use. By Louisa C. Lippitt, R. N. Illustrated. Yonkers-on-Hudson, New York: World Book Company. 1919. Price \$1.28.

The purpose of Miss Lippitt's textbook is, to explain the means by which girls and women may attain health and happiness in the present and lay the foundation for sane and vigorous lives in after years. In clearest terms it lays down practical instructions for the conduct of their daily lives. Not only are the rules set out, but, the reasons which underlie them are made clear. Directions are given for preventing the spread of infection from cases of communicable disease; and instructions are furnished for the care of oneself and one's family in cases of accident or sickness. The author has given adequate treatment to the ideas that she considers most helpful to lay readers, but, she has taken pains not to go too deeply into the scientific aspects of any subject. She has desired to keep the book rather brief and, for this reason, has introduced only those topics on

which women and girls seem particularly to need instruction.

There is, however, much more to this little book. It constitutes a splendid textbook for the home study of practical nurses and of those members of the families upon whom the nursing of relatives and friends so often devolves. The Reviewer has several such devoted women in mind who have asked him from time to time for books suitable for their information. It is to them that Miss Lippitt's book will appeal and to whom it will be of great value.

Finally, the closing chapter discussing the trained nurse is of interest and deserves to be promulgated widely. The author describes briefly the duties of the trained nurse to her patient, as also the duties of patient and family to the trained nurse. This chapter is one the contents of which should be impressed upon the laity by physicians employing nurses for their patients. Trained nurses often are treated carelessly or with disregard, with a culpable forgetfulness of their natural limitations and of the consideration that is due them.

"PRACTICAL MEDICINE SERIES"

Volume 7 of "The Practical Medicine Series" for 1918 is devoted to last year's literature on skin and venereal diseases, being edited by Oliver S. Ormsby and James Herbert Mitchell. The price of this volume separately is \$1.40.

"The Practical Medicine Series" is published in 8 volumes per year, at a subscription price of \$10.00 for the series. The reviews cover the entire field of medicine and surgery, each volume being complete on the subject of which it treats for the year prior to its publication. The series is issued by the Year Book Publishers, of Chicago.

"MEDICAL CLINICS OF NORTH AMERICA"

The September, 1918, number of "The Medical Clinics of North America" is the United States Army number, the contributors all being members of the medical corps of the United States Army.

Major-General Gorgas, the former Surgeon-General, contributes a paper on clinical research in a United States Army base hospital. The epidemics of pneumococcus in-

fection, streptococcus infection, etc., that were observed in various camps, are discussed among others by Major Walter W. Hamburger, while many other important communications are to be found in the number.

"The Medical Clinics of North America" is published bi-monthly by The W. B. Saunders Company, of Philadelphia, the present issue being No. 2 of Vol. 2. The subscription price for six numbers per year is \$10. This publication is an unusually meritorious one.

DELANO: "EXERCISE"

How Shall I Take Exercise and Set-Up? A Physician's Analysis of the Why and Wherefor What's What and of What's Worth While in Exercise. With Illustrated Movements. By Samuel Delano, M. D. Boston: The Four Seas Company. 1918. Price \$2.00.

A series of instructions for physical exercise, many of them being illustrated. The author properly differentiates between exercise in health and in ill health. He gives instructions how to acquire poise, how to remedy round shoulders, how to breathe--a matter in which the majority of people are woefully ignorant. There is much in this little book that might well be taken to heart by physicians, both for themselves and for their clients.

WEBSTER: "PAPER WORK, MEDICAL DEPARTMENT, U. S. ARMY"

Paper Work of The Medical Department of The United States Army: A Guide for Administrative Work. By Ralph W. Webster, M. D. Approved for Publication by Direction of The Surgeon General of the U. S. Army. Philadelphia: P. Blakiston's Son & Co. 1918. Price \$5.00.

Although the great war fortunately has been brought to a happy close and most medical men in service are being returned to their civilian practices, an authoritative textbook dealing with the paper work of the medical department of the Army and offering a guide for the administrative work can not fail to be of interest and of benefit to all those who have been in active service. To others, also, the book comes rather as a revelation showing that the work of medical officers is not all comprised strictly in the practice of medicine,

surgery, hygiene and sanitation, but that the duties of the army medical officers are onerous and complex in many respects. We may even learn some practical lessons for our own every-day work and guidance, with suitable modifications, for attending to our civilian practice with more orderliness and to better advantage.

"THE NATIONAL STANDARD DISPENSATORY"

The National Standard Dispensatory. Containing the Natural History, Chemistry, Pharmacy, Actions, and Uses of Medicines. Including those recognized in the Pharmacopoeias of the United States, Great Britain, and Germany, With Numerous References to Other Pharmacopoeias. In Accordance with the Ninth Decennial Revision of the United States Pharmacopoeia. By Hobart Amory Hare, B. Sc., M. D., Charles Caspari, Jr., Ph. G., Phar. D., and Henry H. Rusby, M. D. Third Edition Enlarged and Thoroughly Revised. Philadelphia: Lea & Febiger. 1916. Price \$9.50.

Although this edition (the third) of "The National Dispensatory" bears the copyright notice of 1916, it was published only a few months since and corresponds with the provisions and information of the ninth revision of the U. S. Pharmacopoeia.

Physicians are prone to forget the existence of these two important publications, namely "The National Standard Dispensatory" and "The U. S. Pharmacopoeia." They should study both much more fully than they often do. The recent publication of both works in new editions should provide a suitable occasion for this.

BROWNING: "BACTERIOLOGY"

Applied Bacteriology: Studies and Reviews of Some Present-Day Problems For the Laboratory Worker, The Clinician, and the Administrator. Edited by C. H. Browning, M. D., D. P. H. London: Oxford University Press. 1918. Price \$2.50.

This little volume contains a collection of separate articles, partly by the author,

partly by others, that have appeared in medical journals and other publications, while some have never been published. After the introductory chapter on "The Scope of Applied Bacteriology", there follows one on "The Diagnosis of 'Enterica' Infections by Bacteriological and Serological Methods". Further, a chapter on "The Use of Calibrated Pipettes in Serological Work". Of special interest is the chapter on the "Observation on the Diphtheria Group With Special Reference to the Recognition of Pathogenic Members" and that on "Studies on Antiseptics". These are but a few of the interesting chapters contained in this little volume that may be studied with practical benefit.

WARNSHUIS: "SURGICAL NURSING"

Principles of Surgical Nursing: A Guide to Modern Surgical Technic. By Frederick C. Warnshuis, M. D. With 255 Illustrations. Philadelphia: W. B. Saunders Company. 1918. Price \$2.50.

A well written, beautifully printed and copiously illustrated book for the guidance of surgical nurses.

"QUIZ-COMPENDS"

A Compend of Genito-Urinary Diseases and Syphilis, Including Their Surgery and Treatment. By Charles S. Hirsch, M. D. Third Edition, Revised. With 59 illustrations. Philadelphia: P. Blakiston's Son & Company. 1918. Price \$1.50 net.

A Compend of Genito-Urinary Diseases and Syphilis, Including Their Surgery and upon Prof. Joseph P. Remington's "Text-Book of Pharmacy", the United States Pharmacopoeia IX and the National Formula IV. Ninth edition, revised and enlarged by Heber W. Youngken, Ph. G., Ph. D. Philadelphia: P. Blakiston's Son & Company. 1918. Price \$1.50 net.

A Compend on Bacteriology Including Pathogenic Protozoa. By Robert L. Pitifield, M. D. Third edition with 4 plates and 82 other illustrations. Philadelphia: P. Blakiston's Son & Co., 1917. Price \$1.25.

Condensed Queries Answered

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report their results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters

Queries

QUERY 6412.—“Intestinal and vesical tuberculosis.”

V. G. K., Michigan, desires assistance in the treatment of a case of tuberculosis of the bowels, and also of the bladder.

As you can readily understand, doctor, it is difficult to prescribe for your patient without having a much clearer idea of his condition. Naturally, treatment must be varied to meet changing requirements. So, here, when tuberculosis of the bladder complicates intestinal tuberculosis, it is safe to assume that the kidneys also are involved. The prognosis, therefore, is far from hopeful.

In all these cases, rest in bed and attention to the diet are of utmost importance; especially is this true when diarrhea is persistent. Moreover, the patient should avoid all mental or physical exertion and partake of only such nutrients as will be assimilated. It is also desirable to combine the greatest variety of those nutrients the physiological action of which will reduce secretion; in other words, those that have a tendency to constipate.

As you may be aware, properly prepared buttermilk or an active preparation of the bacillus bulgaricus added to ordinary milk may prove extremely useful. We would suggest bacillus-bugaricus bouillon or galactenzyme, in rather full doses, two or three times daily. In all these cases, guaiacol carbonate or creosote proves useful while intestinal antiseptics (sulphocarbonates compound) may be given in alternation.

Occasionally, it is essential to administer an opiate. Here, a combination of zinc and codeine proves most satisfactory —say, zinc sulphocarbolate, gr. 1; codeine sulphate, gr. 1-4; hyoscyamine sulphate, gr.

1-1000; strychnine sulphate, gr. 1-128.

In vesical tuberculosis, the essential features of treatment are: rest, proper diet, suitable clothing, fresh air, suitable medication, and freedom from worry. Creosote carbonate again is indicated, as is also hexamethylenamine, preferably in combination with acid sodium phosphate.

If pain and tenesmus are present, antispasmodics are indicated. Small doses of hyoscyamine may be given, in combination with the hexamethylenamine and acid sodium phosphate. If the zinc and codeine combination suggested above is being used, the hyoscyamine will, of course, be unnecessary.

Local treatment generally is of value. The present writer prefers a 4-percent boric-acid solution as a cleansing wash. If the bladder first is washed out with a very weak silver-nitrate solution, by means of a catheter and then a 10- to 25-percent solution of argyrol injected, very pronounced benefit usually results. The argyrol, though, may suitably be replaced by silver nucleinate.

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QUERY 6413—“Indicanuria.” E. O. L. Illinois, writes:

“What, in your opinion, is the significance of persistent indicanuria and what will cure it? I have had it for the past six months and it seems to resist every kind of treatment. I am, apparently, in good health, aside from a slight gastro-intestinal disturbance and a neurasthenic tendency, which I have always had. My age is fifty; height, 5 ft. 11 in.; weight, 169 pounds. The x-ray shows ptosis of the hepatic flexure of the colon and a spastic condition of the descending colon. I have recently begun using an abdominal belt

for this condition. Examination of the urine, after an attack of acute indigestion, showed a few hyaline casts, but, repeated tests disclose no more, no albumin is present; the specific gravity is 1030 in early morning and between 1018 and 1010 throughout the day; reaction is highly acid. My blood pressure averages about 140, systolic. I have refrained from meat most of the summer, still, when I have partaken of it, the indicanuria is no worse. My bowels more often are loose rather than constipated.

"I have been using mineral oil, Bulgarian bacillus, various intestinal antiseptics, pancreatin, oxgall, secretogen, compound sodium glycocholate, and calomel. After a course of calomel, the indican lessens to a trace for a day or two, and it is the only drug which seems to influence the condition in the least. Some authorities say that the appearance of indican in the urine, up to 77 percent (taking the color of Fehling's solution as a standard), is not pathological, while others insist that indicanuria always is abnormal.

"Up to the present, I am convinced that worry over the condition has done me more harm than the condition itself. Can you help me out?"

As a matter of fact, doctor, indican can not always be regarded as evidencing the presence of a pathological condition, still, persistent indicanuria points toward intestinal indigestion, appendicitis, peritonitis or chronic enteritis. It always is present in some diseases of the liver and pancreas and invariably so in chronic constipation.

As you are aware, indican is the chromogen of indigo-blue and arises from the absorption, from the intestinal canal, of indol, itself a resultant from the decomposition of proteids. In health, indol is formed in but very small amounts, being one of the products of the bacterial putrefaction of albuminous compounds, increased under a diet rich in meats or animal food, these containing a large percentage of proteid elements.

It is true that the clinical importance of the presence of indican has been exaggerated by some; nevertheless, in our opinion, it is more likely, generally, to be underrated. Its persistent presence affords valuable evidence of excessive proteid decomposition in the presence of bacteria. Such putrefaction leads to disturbances in the liver, various forms of gas-

tritis, and much more, and those conditions that only can be described as resulting from toxemia and auto intoxication.

An increased output of indican can be observed in cases of intestinal obstruction, associated with atony, and in most intestinal disorders dependent upon a diminution of bile: also, where there is a deficiency of hydrochloric acid in the stomach. In those forms of dyspepsia in which the motor power of the stomach is impaired, indicanuria virtually always obtains.

Speaking broadly, indicanuria, therefore, usually is associated with gastrointestinal disorders, marked by flatulence (a positive evidence of bacterial growth) and nondigestion of fats. A very long train of symptoms—nervous, hepatic, and renal—have their origin in putrefactive processes in the intestine.

It is pointed out by Guiteras that the occasional presence of indican must not be regarded as distinctly pathogenic, yet, persistent indicanuria invariably affords a clew to the nature of the disease from which the patient suffers. Thus, a furred tongue, injected eyes, loss of appetite, headache, torpor, both mental and bodily, and so on, with or without tenderness over the liver and abdomen may occur without indicanuria, although, usually, they coexist with it.

We are just beginning to understand something more about the action of the internal secretions, and, in a man of fifty of a neurosthenic tendency and suffering from slight gastrointestinal disturbance, the presence of indican is not at all a matter of surprise.

Bear in mind, doctor, that, when there is ptosis of the hepatic flexure and a spastic condition of the descending colon, abdominal massage and proper exercises would seem advisable. Undoubtedly, also you should eat but very little red meat, while it is probable that very marked improvement will follow a course of sodium iodide, 10 grains in solution taken three times daily after meals. It might be well to initiate treatment with calomel, podophyllin, and bilein at night, followed by a laxative saline the next morning. For one week thereafter, some such combination as this: bilein, gr. 1-8; strychnine arsenate, gr. 1-128; pancreatin, gr. 1; sodium sulphocarbolate, grs. 2 1-2; sodium carbonate, grs. 2 1-2; one tablet to be taken an hour after

meals. Thereafter, begin with the sodium iodide.

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QUERY 6414—"Sudden Death During Convalescence from Influenza." I. E. C., Quebec, Canada, desires our opinion in the matter presented in the following letter:

"On October 14, I was called to a patient of mine, a young woman, aged twenty-four, single, who was ill with the socalled Spanish influenza. Typical symptoms; temperature, 102° F.; pulse, 100; respiration, 20. On the 16th, the temperature rose to 103 degrees; pulse, 116; respiration, 28; and some 'rusty' sputum appeared. Breathing was very harsh over the base of the right upper lobe posteriorly, with some fine moist râles. Some crepitations were audible in the upper left lobe anteriorly. Definite blowing breathing developed over the base of the left upper lobe on the 18th, when the temperature went up to 105 degrees, the pulse to 118, respiration, to 30, and the patient was very delirious. There was little coughing and no expectoration. She was very cyanosed. She remained in this condition until the night of the 20th, when the crisis occurred, the temperature dropping to 98° F. in about ten hours. On the afternoon of the 23rd, a violent fit of coughing occurred, breathing became very rapid, and, the temperature rose to 102° F., but, receded to normal in about six hours. Nothing worthy of note occurred until the evening of the 27th, when the patient suddenly became very dyspneic and died in about ten minutes. At the time of my last visit, about eight hours earlier, her condition was perfect: temperature, 98 degrees, pulse 84, respiration 20, color good, and heart-sounds perfectly normal. The blowing breathing still was very marked over the area mentioned. My theory is that on the 23rd, when the cough and rapid breathing occurred, she had a pulmonary embolism of slight degree, with recovery, and that death resulted from a second, more extensive, one. What is your theory?"

It seems to us, doctor, that your explanation is a very plausible one and that, in all probability, it is quite acceptable. In conversation with physicians, we have heard of similar cases, more than once, in which the patients had virtually recovered from their influenza and then suddenly succumbed to an attack of — — whatever it may have been. Such distressing acci-

dents occur without the slightest warning and, in the absence of a necropsy, it is exceedingly difficult to determine the cause.

It is different in the case of those patients who succumb to their influenzal pneumonia. In them, death is actually due to "drowning," as Doctor Richardson, of Boston, has put it.

If any readers of this department have cognizance of similar occurrences, the Query Editor would be glad to receive their reports, and, likewise, their opinions as to the cause of death.

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QUERY 6415—"Myxedema in a Baby?" C. L. K., Kansas, was recently called to see a 9-months-old child, a boy. About four weeks before, this little boy was afflicted with an eruption, which the attending physician pronounced "hives." The eruption grew worse and the case was diagnosed "measles," the family being quarantined. At about the same time, the baby's whole body—arms, legs, hands, and feet—began to swell, when the case was considered to be of a dropsical nature. "As the attending physician, after two weeks, seemed to be unable to afford any relief or reduce the swelling (attributing the symptoms, evidently, to some hepatic or gastric disturbance, if the medicines given were any criterion), I was called in by the father.

"I found the child, which was rather large for its age, lying quiet, occasionally emitting a 'grunt' making but slight movements with head; with large, full face, but, not unintelligent; cheeks a ruddy red; a confluent measles-like eruption on the arms and slightly on the body; the skin on back and buttocks scaly and yellowish-brown, scrotum size of a duck's-egg, also considerably bronzed; the whole body, legs, arms, feet, and hands considerably swollen; a leathery skin that did not leave any dents upon pressure. After looking the boy carefully over, I decided it to be a case of myxedema, but, found difficulty in explaining the meaning of that word without suggesting cretinism. I had never had a case like it before.

"After administering a brisk laxative and hydragog, which seemed to relieve the child considerably, I put him on desiccated thyroid gland, 1-3 grain at a dose, at first twice then three times a day, then 1 grain at one dose daily. After a week,

decided improvement set in and now, after a month, there have been no untoward symptoms or relapse, the boy still taking 1 grain of the gland daily.

"Question: Are there any prospects of an entire cure, and what treatment should best be followed?"

We dare not venture a diagnosis with our limited knowledge of conditions. Myxedema, as you know, rarely occurs in so young a child. Is there any possibility of congenital syphilis?

You do not give us any idea of the condition of the thyroid gland, neither does there seem to have been any prior anemia. What was the character of the eruption that was pronounced "hives"? Urticaria could not possibly resemble measles. It is just possible that this was a typical case of measles or even scarlet-fever, with involvement of the kidneys. On the other hand, you have reasonably good grounds for your diagnosis. Do not forget, however, that the whole train of pathological symptoms might be relieved by, and marked improvement follow, a course of laxatives and desiccated thyroid gland. Were this true myxedema, one would hardly expect very decided improvement within one week, as it occurred in this patient.

What is the child's condition at the present time? You merely say there have been no untoward symptoms or a relapse. Do we understand that the discoloration on the buttocks has disappeared and the leathery condition of the skin no longer obtains? Is there any eruption whatever? What about the facies? Is the expression bright or dull?

Give us all the light you can in this rather peculiar case, and, if possible, send us a photograph of the little patient. While myxedema must be thought of, we are not sure that this disease exists here. What was the condition of the child prior to the appearance of the eruption—the supposed

"hives?" Was the child at the breast or fed artificially? Be sure and note the pulse rate.

In reply to the foregoing letter of ours, the Doctor wrote as follows:

"Regarding the case of supposed myxedema, I wish to add that congenital syphilis is not improbable, owing to the life-history of the mother and her father; but, I had this considered and, as I had read somewhere that myxedema brought on through syphilitic causes would yield only to antisyphilitic treatment and this case responding so quickly to the thyroid gland treatment, I excluded that factor.

"There was inactivity of the kidneys and bladder just before I was called, but, the hydragog cathartic I administered relieved these symptoms at once and the only further treatment given was the thyroid gland and arsenious acid. To obviate any eventual deleterious effects of the thyroid preparation, the latter was omitted after the first week. The gross conditions disappeared entirely within a week and no other symptoms have shown since, except a cold and cough the last two weeks, accompanied by otitis media, which latter was controlled with a boric-acid, glycerin, and alcohol solution. The condition of the child prior to this trouble was satisfactory, he being bright and playful, although he is large and has a rather large head. The child has been nursed by the mother, but, will be weaned this week, being now thirteen months of age. The discoloration of the back and buttocks and all swelling, also the leathery and scaly condition of the skin disappeared and there is no further eruption. The only eruption I saw on my first call was on the arm and of an erythematous nature, so I can not tell anything about the previous symptoms, except, for the statement of a lady attending the child, who has some experience with children, that she did not consider it measles or hives.



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New Aspects of Medical Efforts

THAT the methods and conditions of the work of medical men, are, at present, in a stage of transition, is nothing new. There is a general feeling of unrest, of dissatisfaction, a groping, more or less blindly, sometimes, though, deliberate and purposeful, for greater development toward the ideals of medical practice that justly are found in the prevention of disease, making unnecessary the curing of it, because of its nonoccurrence.

It has been suggested that medical men returning from service in the army and navy, either in the home country or abroad, will not be satisfied to go back to the old routine work, to grope along in the accustomed grooves. New outlooks have been obtained; new ideas have been formed, and new ideals have arisen. One field of splendid activity, suitable for medical men, that has been opened up in recent years and is but partly developed, is well touched upon by a correspondent to *The Journal of the American Medical Association*. In the December 21 issue of this publication, on page 2093, Dr. J. F. C. Luhan, acting assistant surgeon of the U. S. Public Health Service, has put the

problem so well that we can do no better than to reproduce his letter in full, as follows:

"Now is the time for American small municipalities to rise and demand health protection and to pay for it. Thousands of able, educated, experienced young medical officers from the Army, Navy, and Public Health Service will soon be discharged or will leave by resignation. Give these young, able men a chance to work as paid health-officers in each community of, say, 5,000 inhabitants and above. Pay them living-salaries and make them independent from the start. Place them in groups under older officers as supervisors, and let the U. S. Public Health Service do the general supervision and direction of the work, so that uniform and advanced procedure may be maintained. Establish suitable, perhaps small but, still, well-equipped laboratories, for conducting bacteriologic and biologic work, in some centrally located larger city, and place an efficient officer in charge. Build hospitals!

"Have on hand an adequate staff of nurses, not only to supervise the school-hygiene, but, also, to visit and instruct

families in their homes and to detect over-crowding in the slums of the city. Make available self-sustaining, sanitary boarding-houses for single men and women; protect the children from the evil influences of star-boarders and the like. Segregate tuberculous subjects. Have a social-welfare committee regularly appointed and managed by Red-Cross staffs, these to teach to the foreign-born the American way of clean living and to see to it that pure air and, in winter, sufficient heat is supplied the needy, and that the children are properly clothed. Give the American public the benefit of the experience for which they had to pay so dearly. Americanize the foreigners, by paying more attention to their welfare."

God help the man who has no friends.

THE NEXT LIBERTY LOAN

If any of us think that, with the signing of the armistice, on November 11 last, we were through with the war and could now definitely turn to other pursuits, they decidedly have another "think" coming. True, the fighting-work of the soldiers and sailors that we sent abroad is accomplished. There is little for them left to do, although that little is tedious enough. However, when we sent our soldiers across the water, we undertook to maintain and support them. The debts that were incurred in connection with our participation in the war are, by no means, liquidated, and Uncle Sam, we are told, is getting ready to make another "touch."

There can be no question that it is for us stay-at-homes to pay those bills. Yet, the government, by no means, desires to make it a donation-party; all it wants is, to have the necessary funds advanced by way of loans for which promissory notes will be issued, just as they were during the first four Liberty-Loan Drives.

Whether the next bonds issued will be designated as Liberty Loan or Victory Loan or Victory-Liberty Loan, or as something else, is of small import. The essential point is, that the American people continue with a will to place the necessary funds at the disposal of the government, that it may liquidate the obligations assumed by its participation in recent events. The money raised on the four previous

Liberty Loans has been spent, and there yet are bills to be met. Also, it will cost many millions of dollars to bring back our American soldiers from overseas. In the meanwhile, the men must be fed and kept up in every way, in order that the American army may maintain its excellent reputation for efficiency.

The point of all these remarks is, that it is incumbent upon all of us to keep on saving as we have been doing during the past year, and, more, to put by every dollar we can, investing it in government paper, such as War-Savings Stamps and Thrift Stamps, or to put it in the bank in readiness for the Fifth Loan whenever the government may decide to announce it. In order to make available needed funds before that time, the Treasury Department now is selling Anticipation Certificates that cover the Federal Taxes due this year and designate the subscription for the coming Fifth Loan.

All this is nothing to be complained of. As a people, we have learned to save our pennies and dollars, to do without non-essentials, and to live more simply than before. It is this lesson of thrift, as it had been inculcated into the French people fifty years ago, that enabled them to recover so rapidly from the reverses of the Franco-Prussian war. We, on our part, do not have such a humiliating incentive. We have the encouraging knowledge of having aided in a good fight and in an undertaking that is bound to make the world a better place to live in. All the more reason why we must be willing to do our full share, and not to stop as long as this is demanded of us.

FOR AN AUTOMOBILE-TRIP

Nearly every doctor drives a car, and every doctor ought to take a vacation. The ideal vacation is, a trip with a car—a trip on which you can take along the wife and the kiddies, wear your old clothes, and sleep in the open. (Of course, the madam may object to sleeping in the open, in which event, you will defer to her wishes and sleep in hotels.)

Now—the purpose of this editorial item is, to introduce a symposium on automobile-vacations, this symposium to appear in one or more subsequent issues of CLINICAL MEDICINE, in or after our June issue.

Many of you have taken trips of this kind. You know all about the scenery, the roads, the entertainments, all the many advantages as well as disadvantages of such a trip across the country. Write this up and let us have it for publication; and, if you have any advice to offer about the car that you drive, as also about car "diseases" and how to cure them, put that into your story.

May I tell you a deep secret? I am going to take an automobile-trip myself next summer, and I want to know just where to go. I am looking forward to the receipt of your letters, because I am sure that among them I shall find just the tip that I am looking for. So, then, I am hoping that there will be coming in a bunch—a big bunch—of stories. And, don't put off the writing of them too long. Put on your thinking-cap and yank out your fountain-pens. Procrastination, you know, is the thief of time, and has killed many a child before it was born.

THEODORE ROOSEVELT— AMERICAN

The *American Review of Reviews* reproduces in its February number a cartoon from *The New York Times*, depicting how, in the opinion of the artist, Mr. Marcus, the late Theodore Roosevelt will be remembered. The drawing shows a memorial tablet with the name Theodore Roosevelt. Underneath are crossed out his various attributes and pursuits, namely, president, statesmen, soldier, historian, explorer, naturalist, orator. All these are marked out by History who stands before the memorial tablet and has written underneath, in large letters, the word American.

That is as true a tribute to the memory of Mr. Theodore Roosevelt as has come to our attention. Much has been recorded and will be written concerning this remarkable figure in the history of the American people for the last quarter-century. But, nothing will be able to equal in truth and terseness the one attribute that will keep his name before posterity as that of having been an American in the best meaning of the word. Fearless and true, industrious and eager to learn, and to complete and round out his knowledge, with an almost passionate desire to benefit his fellowmen, to uphold the cause of justice

and truth and liberty, Roosevelt could not fail to make just as good and cordial enemies as he did friends; but, no matter who were his opponents, nobody could deny him honesty of purpose and sincerity of action. Mr. Roosevelt's name is recorded with those of the greatest Americans. He lived a full life and leaves his memory green behind him.

Friends made for an end don't last till the end. Any friendship that has to be bought, not, necessarily, in dollars, but, by fawning or flattering or dining or entertaining, is not worth the price; it is not worth having. Smiles don't win the best kind of friends; it's what is behind the smiles—personality, ability. Friendships inspired by your pocketbook are not friendships; they are, as far as you are concerned, frauds, for, they are not genuine, they are not true-blue, they are not sincere. Deliberately setting out to win friends for selfish motives is like deliberately setting out to win happiness; you gain friends as you gain happiness, not by purposely trying to obtain them, but by meriting them in the course of the day's work.

—Albert H. Wiggin.

DISEASES THAT ARE TRANSMISSIBLE FROM THE DOMESTIC ANIMALS TO HUMANS

In this issue of CLINICAL MEDICINE, we publish a discussion by Lieut. G. H. Conn of the Veterinary Corps, U. S. Army, concerning those diseases that are prevalent primarily among animals but which also possess or can acquire pathogenic properties for humans, so that the diseased animals become dangerous to persons handling them or coming in contact with them.

Lieutenant Conn has enumerated the most important and frequent diseases the epidemiology of which concerns both animals and humans. There are, however, several other maladies that are transmitted to man in a similar manner and which, therefore, become of considerable economic importance. While it is not always the case that these diseases occur primarily in domestic animals, they, at least, often are prevalent in animals that infest the domiciles of man as for instance rats as carriers of plague. Moreover, the transmission does not necessarily take place by direct contact but frequently is intermediated by insects, such as flies or fleas. Nevertheless, it is of interest to refer to a few diseases not mentioned by Lieutenant Conn in order to supplement the list.

For us, in America, the diseases of greatest importance are, plague and Rocky Mountain spotted fever; in other countries

there are to be considered Malta fever and trypanosomiasis, among others.

Plague is primarily a disease of rats while man contracts his infection from these animals. With the exception of bubonic plague, which, under certain circumstances, is transmitted directly from man to man, plague infections originate from the bite of fleas that have become infected by feeding on the blood of plagued rats. A rat might become infected from bites received in a fight with an infected rat, or man might be infected through a cut while handling plague material. But, these methods are relatively of subordinate importance. Dieudonné and others have pointed out justly that plague-stricken rats and rats dead of plague are a far greater menace to a community than are cases of bubonic plague in human beings.

Rocky Mountain spotted fever has prevailed in Montana and Idaho for several decades and cases have been reported from virtually all of the Rocky Mountain states. It is transmitted through the bite of a tick, which facts suggests the necessity of some host mammal for the perpetuation of the disease; and, indeed, it is largely sheep and other domestic animals, as also certain small wild animals like squirrels, from which spotted fever is transmitted to man through the intermediation of the tick.

In the case of trypanosomiasis, practically the only method of transmission of the disease is by infected tsetse flies. These flies feed upon animals such as antelopes and others ill with trypanosomiasis and may then transmit the infection to man by their bite.

While the infection of Malta fever probably may be taken in through wounds upon the mucous membrane, or by food and drink introduced through the mouth, recent work by the British commission for the investigation of Mediterranean fever points strongly to milk from goats suffering from Malta fever as a probable factor for the continuance of the disease in Malta. This commission found that the milk of over ten percent of the Maltese goats examined contained the micrococcus. When the goats' milk supply to the Naval Military Hospitals in Malta was pasteurized or changed for canned milk, the prevalence of the disease practically ceased in the hospitals. Mohler's observations in Texas seem to confirm this, in that the Mexican

goat herders who boil their milk are rarely infected, and Malta fever was stamped out of Port Said by destroying all infected goats.

The man's a rotter who starts out to make friends for what there is in it for him. He's also a fool, for, people will soon get onto his curves.

—Albert H. Wiggin.

HOW MUCH DOES FRIENDSHIP COUNT IN BUSINESS?

In the current number of *The American Magazine*, B. C. Forbes reports a conversation that he had with Albert H. Wiggin, the head of the Chase National Bank, of New York, on the commercial value of friends.

Mr. Wiggin has much to say regarding the gaining and holding of friends and, also, concerning the advantages that one may gain from them. Some of his remarks are so to the point that we have used them as fillerettes between the editorial articles in this number. Please read them all; they are worth it.

As we take it, the matter of gaining friends, and of holding them, by no means, is a commercial proposition, not even in business. This, of course, is nothing new, but, it may be as well to stress the fact. Time was, not so long ago, when business affairs were conducted in accordance with the ancient "let the buyer beware." The last years, less than a generation, have seen the development and the proving of the far more dependable view that business is not a question of getting the best of the other fellow, but, rather, a matter of dealing for mutual advantage. For this reason, friendships are not to be made to serve ulterior motives but, as Mr. Wiggin shows, follow naturally by way of reward of honest treatment of others.

We have heard it said, and learned many years ago, in the Latin class: "*manus manus lavat*," one hand washes the other—one good turn deserves another. This philosophy reminds one of the "senatorial courtesy" through which votes are exchanged, a senator voting for a certain proposition on conditions that his "friends" shall vote for measures that he particularly desires to have passed. This sort of mercenary friendship is not that referred to or demonstrated as superior by Mr. Wiggin. He makes friends because he has something to offer in return; not so much material

benefit, but stimulation, enthusiasm, loyalty, sympathy and encouragement. According to Mr. Wigggin, one does not put his friends into the way of doing things, but, these are chosen for big positions because they have, already, proved their worth. Mr. Wigggin's philosophy regarding business friendships is possibly novel in its unafrican terseness and abruptness of description. However, come to think of it, it is based on sound sense and on truth. We make friends when, and because, we deserve to make them.

To bring the thing home to our own circumstances. Often enough, a physician, especially a young man, is called because of a friendly feeling for him. That, though, is only offering an opportunity to give service. Strong and lasting friends are made only if they are deserved. We may be given the chance. It depends on us to deliver the goods, and, doing so, to earn friends. Think it over, doctor.

The man who is afraid, when occasion demands, to make an enemy is not fitted to be a worth-while friend.

—Albert H. Wiggin.

UNCLE SAM INSURANCE AGENT

One of the many tremendous business enterprises that the United States government undertook upon entering the war and on making arrangements to finance its many and various phases was, the insuring of soldiers' and sailors' lives with the U. S. Government at a cost to the insured man that was just about sufficient to meet the expense of this vast undertaking. The immensity of this business may be judged by the fact that the insurance carried by the soldiers and sailors in Uncle Sam's service amounted to a grand total of almost thirty-seven billion dollars.

The insurance-company which Uncle Sam has established for the protection of his nephews is the greatest life-insurance company in the world and is as safe and reliable as is the United States government itself. It is the intention to continue, after demobilization, the insurance through the days of readjustment and peace. In a recent communication to the soldiers and sailors of America, Mr. McAdoo urges all the men not to permit their insurance to lapse, but, to continue it by regular payment of premiums, so as to be able, in the course of time, to change it into a stand-

ard government-policy, without resubmitting to a medical examination. The rate at which this insurance is written is extraordinarily low—lower than any private concern could sustain. It is to the interest of our own men not to permit their insurance to lapse and physicians should counsel their young friends against such a step.

WHAT SHALL I DO WITH MY LEISURE?

I know that many of you, reading the title of this editorial, will be inclined to answer the question raised with a remark something like this: "Leisure? I haven't any."

My answer to you is—"You are mistaken, my dear doctor; you have a great deal of leisure, only you don't know it."

Every man has leisure, and the use he makes of it determines the kind of man he is and measures the quality and quantity of the success he is destined to achieve.

These bromidic remarks are intended simply as an introduction to Doctor Rittenhouse's fine article published elsewhere in this issue. It is an article which I hope every reader of CLINICAL MEDICINE will go through religiously, and I trust that no man who reads it will fail to take advantage of the inspiration which it carries.

Like Doctor Rittenhouse, I believe that no man can become a really full man, can rise to anywhere near the full measure of his capacities who is not a reading man. Nor should his reading be limited to the imperative requirements of his profession. That that man gets most out of life whose interests are widest, certainly is illustrated by the life of Theodore Roosevelt, concerning whom Doctor Rittenhouse writes so sympathetically.

In this connection, I want to urge every reader of CLINICAL MEDICINE to write to the Bureau of Education, Washington, D. C., and ask for the lists of the reading courses recommended by the Home Education Division. It has arranged courses of this kind for boys, girls, mothers, and for general reading, covering such topics as American history, classics, fiction, and the like. Any person who completes one of these courses and will give satisfactory evidence of the fact to the Bureau, will be given a certificate signed by the Commis-

sioner of Education and bearing Uncle Sam's seal.

I wish those of our readers who have fads and fancies of their own concerning reading and other things of cultural value would write us of their experience for publication in CLINICAL MEDICINE.

Again I want to say that I hope everybody will read Doctor Rittenhouse's article.

Make good first and you will make friends.
—Albert H. Wiggin.

NEW FEDERAL LEGISLATION OF INTEREST TO PHYSICIANS

In the new Finance Bill recently passed by Congress, a number of changes are made which are of very great interest and importance to physicians.

First, the physicians' narcotic-license fee is increased from \$1.00 to \$3.00 per year.

It is further provided that the dispensing physician, who is now specifically mentioned under the law as a "vendor" of narcotics, "*shall keep a record of all sales, exchanges or gifts of such preparations and remedies* in such manner as the Commissioner of Internal Revenue, with the approval of the Secretary of Agriculture, shall direct. Such records shall be preserved for a period of two years, in such a way as to be readily accessible to any officer, agent or employe of the Treasury Department duly authorized for that purpose, and the state, territorial, district, municipal, and insular officers named in Section 5 of this act . . .".

Another phase of the Finance Bill that is of vital interest to physicians involves the payment by the consumer of the so-called excise tax on medicinal preparations, including biologics. The House draft provided for a tax of 10 percent, and the Senate draft for one of 4 percent, or, rather, 1 cent in every 25 or fraction thereof. As the bill was drafted, the physician dispensing his own medicines became a "consumer" in the eyes of the law, and would therefore have been compelled to pay this tax. This draft made an exemption from taxation as regards serums and antitoxins, but, it was so carelessly drawn that vaccines and bacterins became taxable.

An effort was made to secure a modification of this tax so as to exempt the

medicinal and biologic preparations used by physicians. With this in mind, an amendment was adopted by the Senate, exempting "medicinal preparations not advertised to the general lay public". This was stricken out in conference, but, finally at the eleventh hour, the following amendment was adopted by the conference committee to replace it:

"Provided that the provisions of this section shall not apply to the sale of vaccines and bacterins which are not advertised to the general lay public, nor to the sale, by a physician in personal attendance upon a patient, of medical preparations not so advertised."

As the law passed and now stands, therefore, all biologic preparations used by physicians are exempt from taxation, and all medicinal preparations which they personally administer.

This legislation again shows the importance of organization for legislative defense on the part of the medical profession. The physician should interest himself in these matters which are of vital concern to his professional and financial success. Is there not some organization big enough to take the interests of the average (including country) doctors under its wings?

"DOCTORS WANTED"

In the monthly bulletin of the department of health of one of the largest cities of the country, there is an announcement to the effect that there are four vacancies for assistant physicians at a certain hospital for the insane; two at a salary of nine hundred dollars per annum, and two at seven hundred and fifty dollars per annum, including board, lodging and laundry.

Computing the latter three items at the rate of, say, fifteen dollars per week, which probably is considerably in excess of what it costs to "board, lodge and wash" these physicians, that would be an additional seven hundred and eighty dollars, bringing the salaries up to the magnificent sums of about seventeen hundred dollars and fifteen hundred dollars respectively.

In order to be able to earn these princely incomes, the applicants must be graduates of A 1 medical schools; which means that they must have devoted at least six years to the study of medicine both in

college and in hospital. They must have acquired a large amount of highly specialized information and technic such as should make it possible for them to earn incomes upon which they could subsist comfortably, certainly not less than three thousand dollars a year.

There is no doubt that many young graduates will compete for these positions. Needs must when the devil drives. The pity is, that positions as assistant physicians carry such shamefully low remuneration.

The reason it sometimes—in fact, often—happens that a heavyweight job is given to a friend of someone at the top is, because the someone at the top usually chooses as his friends heavyweight fellows.

—Albert H. Wiggin.

THE NONVENEREAL ACQUIREMENT OF GONORRHEA

In a brief note appearing among the leading articles in this issue, Dr. G. Frank Lydston, of Chicago, criticizes the attitude of physicians generally in that they doubt, and even deny, the possibility of acquiring gonorrhea innocently, that is, without unclean sexual contact, while the clinical entity of *syphilis insontium* is acknowledged without hesitation. Cheap wit-ticisms are indulged in, especially on the occasional claims made to physicians that gonorrhea has been acquired, innocently, in the water closet; and, yet, as Doctor Lydston shows clearly, it is quite possible that innocent persons, especially women, are exposed to the dreadful infliction of gonorrhea by this very means.

The present writer has such a case in mind and he had known the patient intimately for many years. The case concerns a woman in middle life in whom the ordinary method of gonorrhea-infection can in nowise be suspected, and her simple assertion to the contrary was quite sufficient to the writer to exclude this mode of transmission. Some weeks before this patient came to consult the writer, she had been obliged to travel through a considerable portion of the northwestern states, being frequently obliged, for want of better convenience, to relieve herself in the toilet rooms of railroad stations. There is positively no question, in the writer's mind, that it was in a place like this that her gonorrhea was acquired. The specific nature of the infection was so

foreign to our preconceived notion in this instance that the discovery of the Neisserian diplococci in the smears came as a painful surprise. However, active treatment fortunately was successful in course of time and there has been no recurrence. This, by the way.

The point that we wish to make is, that, according to our personal experience, there exists a *gonorrhea insontium* just as there exists a *syphilis insontium*. Physicians will do well to be not too cynically distrustful of human veracity but to remember that even the (apparently) most incredible assertions on the part of patients may be based upon fact.

THE PROBLEM OF WAR BREAD

Last year, and the year before that, at the height of the food restrictions necessitated through our sending vast quantities of wheat to the Allied countries and our voluntarily restricting our own consumption of this staple foodstuff, we had some slight taste of war bread, and, as a matter of course, grumbled about it; mostly good-naturedly, though, because it did not please our pampered palates as much as did the brand of the "staff of life" to which we had been accustomed in pre-war times. And yet, in this matter of food restriction we did not even faintly approach the deprivations to which European nations were subjected for the simple reason that no wheat was available.

In a recent number of *Le Monde Médical*, Doctor Camescasse writes in vigorous terms concerning the "detestable bread" that the French were obliged to eat and which was responsible for attacks of extremely painful coprostasis leading to colic and diarrhea, asserting that these distressful consequences of restricting the food supplies were but another item that would have to be charged to the "German Crime", namely, the great war.

The attacks which Doctor Camescasse describes were something like the following. A man of active occupation and who never failed to have a free movement of the bowels, in the morning, is attacked one evening by terrible pain in the region of the appendix. Reaching his residence with difficulty, he seeks the toilet and, with the perspiration streaming from him

while he almost faints, he has a sensation as though he must expel an immense amount of feces. Alas! it is only wind, but, in enormous quantity and passing for a very long period of time. These attacks recur, being followed by diarrheic stools and these giving place to more solid feces; but, even then, the colon still remains filled with fecal matter which it requires days to evacuate.

In cases like this, Doctor Camescasse had recourse to abdominal compresses of hot laudanum water and hypodermic injections of morphine. Every four hours he ordered, in alternation, a coffee-spoonful of castor oil and a powder containing calomel 0.05 centigram, powdered belladonna 5 milligrams, lactose 0.25 centigram.

Under the influence of these remedies there occurred a continuous escape of enormous amounts of wind and as much as four pounds of feces, "of all kinds and of all ages", hardened balls, soft masses, sticky, of unequal coloring, and so on.

In addition to the bread peculiar to the war time which Doctor Camescasse incriminates particularly as the cause of this distressing attack of coprostasis, he also attributes considerable etiologic importance to the one-sided and excessive vegetarianism in which some people were forced to indulge.

Where a man's duties bring him in contact with other people, his personality counts a great deal, for, the man who makes friends gets on better, and paves the way for more opportunities, than the man who has failed to cultivate a reasonably attractive personality.

—Albert H. Wiggin.

PASS IT ON

Thirty odd years ago, when I was a young student struggling to make a living, a good friend presented me with a duplicate copy of Webster's "Unabridged" of which I was greatly in need, but, without being able to purchase a copy. Some years later, when I offered to return the dictionary, I was told to keep it until I could find somebody in need of it and, then, to pass it on.

This experience, many times, has been a lesson to me; and, often, when the opportunity presented for doing somebody a good turn or for accomplishing something that might be good enough in itself but not of immediate, tangible, value to me,

I was put in mind of that old injunction to pass it on; time and again the accomplishment of a certain deed was repaid many times, not only in the satisfaction derived therefrom and in the opportunity to be of service to others, but, also, by inducing others to practice the same rule of passing it on, by mentioning the incentive that guided me.

Life is not only a question of supply and demand but, it is a problem of give and take. Frequently, the giving apparently is not paralleled by a commensurate taking, in the sense of receiving; it seems as though some people do all the giving while others do nothing but take. Yet come to think of it, life has a way of balancing things pretty evenly and, usually, the giving is repaid in some way sooner or later. At any rate, the philosophy of giving because one has received at some previous time, the cordial passing it on to others, is a wholesome one and is always productive of satisfying results

THE "COOTIE"—DOMESTIC VARIETY

So much has been said, in print and by word of mouth, by every soldier returning from trench-life in France, of that pestilential little insect, the "cootie" that we have come to regard it almost as indigenous to foreign lands and peculiarly fond of soldiers. It is, therefore, some little surprise to learn from *The Weekly Bulletin* of the Department of Health of the City of New York that "lousiness" is extremely common in the well-read and presumably well-bred schoolchildren of that great city. Reports covering the 5-year period from 1913 to 1917 show that 1,257,831 cases of phthiriasis had been recorded among an average annual enrollment of 906,000 pupils. Indeed more than 25 percent of the children were infested with these body-lice.

Today, the louse no longer is looked upon as a necessary evil, to be endured with humility, and the belief, that "they always come out of the blood every spring or fall," no longer prevails in polite society. Lousiness is not "bad form," but, is positively dangerous, since it undoubtedly is the means of spreading various serious infectious diseases. Typhus fever has been definitely traced to this source of transmission. So has "trench-fever," which

probably is a new name for an old affection. It is more than likely that a number of other serious complaints are transmitted by the same parasite.

Doctors that are interested in the health of schoolchildren should not neglect the children's hair. *Cherchez la puce!* While it may be less important to examine this part of the body than the chest-cavity, nevertheless, it is quite possible that the lice concealed therein may be of as much danger to the child's companions and its own health as are some of the more common and more thought-about ailments.

We suggest the declaration of a world-war against the "cootie"—and let's begin at home.

Friends don't make a man, but, if a man has the right caliber, he can not help making friends; they just feel drawn to him. The thing to do is not, to set out to cultivate friends who, you figure, may prove useful, but, to cultivate and develop qualities and abilities that increase your own usefulness. If you do that, and do it, of course, on the square, the friendship part will take care of itself.

—Albert H. Wiggin.

DR. ROBERT C. MURPHY

On page 238 of this issue we reproduce a group picture of the medical officers attached to Base Hospital 101 at St. Nazaire, France, where Capt. Robert C. Murphy is now stationed.

Captain Murphy is well known to the readers of CLINICAL MEDICINE through the interesting articles on "The Making of an Army Medical Officer" that he contributed occasionally for over a year, in fact ever since he first entered the training camp. While we published a likeness of him when he was still a lieutenant (Jan. issue, p. 72), the present group picture also is of much interest.

THE MOVING-POWER OF SELF-INTEREST

The world hinges on self-interest.

It is the pivot on which progress and enterprise turn.

It is the human and unquenchable desire for the best there is that spurs the mind to action and the body to supreme effort.

Money, fame, luxury, the joy of accomplishment—these are some of the goals toward which self-interest drives us!

Every great bridge, every towering building, every work of art, every home and fireside are monuments to this domi-

nant egotism. It is the foundation stone of our lives—and a stumbling block to our feet! A foundation so long as it whips us to creative effort, a stumbling block when we lose all regard for the rights of others.

Business and politics have no monopoly on the inherent instinct that causes us to elevate ourselves and our needs above those of others.

Every tender charity, every religious movement, every attack on crime, every crusade against disease originates in self-interest, if only as a means of quieting an inflamed conscience, which, otherwise, would give its hapless possessor no rest.

The man who MUST preach or have no peace, the reformer who WILL reshape the body politic or die trying, the missionary who INSISTS on cramming his religion down the throats of a people who are quite likely to boil him in oil, are all spurred by self-interest—though they know it not and would be the last to believe it!

The rich man's son is so often a failure and a nuisance because so many of his desires are gratified that he finds little left which he considers worth a struggle. If, perchance, he is taught that there are tremendous possibilities for personal gratification in the wise administration of great wealth, he then becomes a joy to himself and a benefactor to mankind.

A wealthy man who died recently used to fill his pockets every morning with gold pieces which he distributed, during the day, wherever he saw an opportunity of relieving distress or giving pleasure.

He gave wisely, but, much good as his gold pieces undoubtedly did, they were worth more to him, himself, than to anyone else. With every coin bestowed he enjoyed a new thrill, a fresh consciousness of good done, of happiness given.

He bought his pleasure hour by hour, day by day, and it was multiplied to him a thousandfold because of the pleasure of others that he promoted.

Generous? Yes, graciously, judiciously, happily generous.

Unselfish? Absolutely, NO! For, there is no question that, had he suddenly found it impossible to distribute his largess and witness the happiness he bestowed, he would have suffered far more than his beneficiaries!

For, there is a selfishness embodying so much of the Divine that this sad old earth

is hungering and thirsting for it today; a selfishness which is only gratified by the good of others, by making the world better and happier.

Self-interest, refined and elevated, self-interest, creative, developing, embracing all mankind, is the power behind all advancement today, the impetus which is rolling the world uphill, millenniumward!

It is not the sort of selfishness which Germany could possibly understand, but, the kind that is an attribute of every loyal American citizen.

THE SELFISHNESS OF UNSELFISHNESS

The preceding editorial article opens up a train of reasoning according to which a somewhat unusual construction may be put upon acts that commonly are considered as being dictated by motives of pure unselfishness, of entire disregard of self. Indeed, it has frequently afforded me amusement to put aside the thanks of some of my patients whom I had treated gratuitously by denying that my services were extended unselfishly, claiming that they were indeed prompted by motives of absolute selfishness.

Why, to go to the bottom of things, do we extend kindness to others? Is it only for the reason that we wish to help them? Is it not rather because the doing of the kindness, the being of assistance, the accomplishing a good deed, is a source of personal satisfaction to ourselves? It is not necessary that we claim all sorts of credit and inspect our shoulder blades for sprouting wings or believe ourselves entitled to a front seat in Heaven. Indeed, we may refuse all manner of thanks and assurances of appreciation. We may disclaim any merit, we may refuse to consider that we have done anything remarkable; yet, the doing of a kind deed inevitably is followed by a degree of satisfaction that carries with it the best reward.

It is for this reason that I claim that, in all unselfish deeds, there underlies a factor of selfishness in so far as they are a means of self gratification.

Is it necessary, therefore, to refrain from helping others without visible or tangible reward? By no means. Surely, that would be driving the most puritanical conscience too far and would defeat one of the great-

est laws of humanity, that of mutual helpfulness. In the language of the Apostle, there are faith, hope and charity, amongst which charity is the greatest. Not, charity in the modern-day sense, but, in its wider meaning of affectionate helpfulness, of a desire to do good without regard to personal benefit. Yet, no matter how "self-forgetful" one may be, there is a reward and, often, a good deed is unconsciously inspired by the desire of self gratification. And, so, we travel in the circle of the selfishness of unselfishness.

When I die, I want no shaft of marble or traceried stone to cover my resting-place. I have spent my life making things. Let my memory be kept green by the work of my hands. When I go, I wish to leave behind me humming mills, smoking chimneys, and great furnaces hot with creative fires of industry. Let those be my monument, and I shall be satisfied.

—Charles M. Schwab.

DEBARKING THE HOSPITAL CASES

Perhaps no division of the Red Cross activities is more picturesque than the Motor Corps, handled entirely by women volunteers. This corps includes not only the ambulance corps, whose remarkable work has made its members famous in every great disaster, but also the cars used officially for necessary passenger service, transportation of officers, and other purposes.

Some idea of the vast extent of this service may be gathered from the fact that, in the Atlantic Division alone, during the month of January, 1919, the Red Cross Motor Corps transported 981 litter cases, and 1,470 ambulatory cases, working from ports of debarkation adjacent to New York City. The men were taken from the boats to the debarkation hospitals. In maintaining this service 347 ambulances were kept on duty and 108 passenger cars were used. In addition, transportation was provided to 255 casual officers and service was given on 264 orders from the army. During the Northern-Pacific disaster, the ambulances of the motor corps were on steady duty for more than forty-eight hours, darting between the scene of the grounded liner at Fire Island, L. I., the Naval Training Station and the local hospitals.

Absolute military discipline is maintained and the efficiency of the service is kept at the highest point. Dr. Dorothy Smyley is in charge of the Motor Corps of the Atlantic Division.

Leading Articles

Dietetic Economics

With Reference to Land Utilization

By A. L. BENEDICT, A. M., M. D., Buffalo, New York

THE uses of land, in order of choice, as determined by the valuation ordinarily placed upon it, are: business, residence, transit, pleasure (parks, etc.), burial, extraction of mineral products (including even clay and sand), food production, and, formerly, fuel (however, at present, forests are mainly used as parts of parks or for the industrial uses of wood). The value of land, even when it is utilized in food production, is determined by its potential use for other purposes, including, therefore, accessibility, rather than by its quality as a potential food producer. Paradoxically, also, as will be illustrated by various points herein to be discussed, the value of land is, in the main, inversely proportionate to that of the food raised upon it.

When we consider that food ranks next after oxygen and water as a vital necessity of existence, it is obvious that dietetic economics is, at present, fundamentally distorted. This distortion, however, is deliberate, although not fully realized. Food, shelter, heat, and clothing were almost the only original necessities requiring the application of labor and, of these, food usually involved the greatest effort. At present, we consider worthy of the highest sociologic thought the fact that the poorest and least-skilled laborer spends half of his earnings for the food of his family; even the skilled laborer today complains bitterly of the high cost of food, even though he earns at least his own and his wife's rations in about the same time spent by him in eating the food; the fairly well-to-do person, still, not so prosperous as to be indifferent to the subject, spends perhaps a tenth of his income for food. Yet, these complaints and the perversion of eco-

nomics in regard to land are right and justified, for, civilized life implies that one's physical needs should be subordinated as much as possible to intellectual and spiritual occupation.

Comparative Productivity of France and Other Countries

Lepique has recently published French statistics, which throw considerable light upon the problem of self-support by a nation. His data are, perhaps, all the more valuable, because France is populated to what may be considered a normal density for our type of civilization, yet, not as densely as are various other European countries; the problem thus being solved for us Americans far in advance of our own immediate needs. France has a population of about 200 per square mile, for the United States it is but 30 per square mile, about a tenth of the land being cultivated.

In 1915, when the influence of the war both stimulated and impeded the raising of crops, France produced enough food to feed her own population for 402 days, the day's rations for the entire population relative to each foodstuff being as follows: Wheat, 168; rye, barley, buckwheat, and maize, 54; potatoes, 60; milk, 42; meat, 40; peas, beans, et cetera, 8; artichokes, 8; sugar-beets, 5; chestnuts, 3; olives, et cetera, 3; walnuts, 2; poultry, 2; fish, 2; eggs, 2 1-2; fruit, 1 1-2; fresh green vegetables, 1.

The writer has been unable to compile corresponding statistics for our own country; still, our cereal products alone, if used for human consumption, are at least five times our total yearly dietetic needs on an equivalent caloric basis. The actual

use of a few staple foodstuffs, practically all of which are produced within our continental boundaries, except about three-fourths of the sugar, is about as follows: Wheat (5 bushels, yielding, at 70 percent milling, a little over one barrel of flour), one hundred and thirty days' rations; other cereals, 20; potatoes, 30; meat, 52; butter, 45; sugar, 68. Total 345. It is probable that milk, for France, includes butter; which, by no means, is as freely used there as by us. While the estimates for the United States are not accurate, attempts to criticize them tend to show too low rather than too high figures and there is a strong suspicion that the small remainder of twenty days' rations for a large variety of foods is to be explained on the basis of excessive consumption and waste, rather than by an excessive estimate for the staples mentioned. For example, there is an old rule of housewives, that butter comes to a pound per capita per week, as well as the old complaint, antedating recent prices, that it costs a tenth of the total food-bill—a rather unreasonable complaint, when we realize that on any such allowance it would supply considerably more than a tenth of the total calories needed.

At a liberal allowance, the caloric requirements per capita per annum is, one million. A less liberal and more exact estimate is given, as follows, by Graham Lusk:

Ages	Number of individuals in U. S.	Calories per capita	Calories per diem for U. S., millions	Percent of total
9 to 5	14,384,000	1500	21,576	9
6 to 13	15,003,000	2300	34,507	13
6 to 9		2500		
7 to 13		2100		
14 to 18 M	3,129,000	3000	15,387	6
14 to 18 F	5,094,000	2500	12,710	5
19 and upward M	33,770,000	3000	101,310	38
M	37,073,000	2500	77,683	29
Total	104,000,000		263,173	100

It will be seen that the writer's liberal estimate of a million calories per capita per annum would come to 104 million millions, while the above figures amount to only a trifle over 96 million millions.

Some Statistics Anent the United States

While our country, as a whole, is far from the time when any exact study of the

economics of food production will become necessary, a fourth to a third of our population already lives in cities of sufficient size so that, for each of them, the uncertainties and expense of transportation, especially for foods that either require rapid transit from producer to consumer, in the interests of wholesomeness and palatability, or which are too bulky for economic long-distance transportation, require almost as careful study as if the 25 to 35 million were united in one densely populated nation. Roughly speaking, each one of these cities may be conceived as a circle, so densely populated that, at best, only a few vegetables, fowls, and eggs may be produced by each, and surrounded by zones; namely:

1. 1 to 5 miles, mainly producing by market-gardening innutritious vegetables and small fruit.
2. 10 to 20 miles, cattle-raising for the direct sale of milk; fowls and eggs.
3. 20 to 30 miles, miscellaneous small-scale farming, large fruits, legumes, potatoes, et cetera, cereals, and meat supplemental to the next zone.
4. 100 to 1,000 miles, land adapted to wholesale production of cereals and meat.
5. Foreign countries supplying products not raised within our confines.
6. Regularly distributed in the second and third zones, areas of hilly land, not adapted to crop raising and relatively hampered in regard to transportation, devoted

mainly to cattle-raising for the production of cheese and butter.

Land in the immediate vicinity of large cities ranges in value from one-half to five million dollars per square mile, whereas, that used for the wholesale production of cereals and meat-ranges, is valued at from about \$2,000 to \$5,000, and that for farm-

ing on a smaller scale, from about \$10,000 to \$100,000. As a general rule, the more valuable the land, the greater the expenses for fertilizing, equipment, and labor, and the greater the resident population to be supported directly or indirectly from it. Indirectly, every man, woman, and child in a large city has a fixed investment of about \$40 in suburban land, half of the products of which must go to the support of a resident working population. This \$40 is, so to speak, an initiation in a club, and he must pay at club-rates for whatever he buys.

Reflections Regarding Vegetable Foods

However, the essential economic flaw in this is not immediately apparent, but, is well supported by Lepique's statistics for France. It is found that, of the 402-days' rations produced by France, only one was in the form of fresh green vegetables. At first thought, this would indicate deficient cultivation of this sort of foods, either quantitatively or qualitatively; however, anyone that has visited France knows that one can scarcely imagine a more liberal or better supply of these vegetables there offered. The flaw is inherent in botanic chemistry. However useful it may be to supply salts, iron, vegetable acids, and rough material for stimulating peristalsis, these vegetables contain very little organic nutriment, so little, indeed, that one uses up more calories in digesting them than they yield, even if he could hold the enormous quantity of between 25 and 30 pounds that contains the nutritive equivalent of the daily requirement of calories, but, which nothing short of a herbivorous digestive canal can extract. And it is for this sort of fodder that the most expensive land and labor is being employed. To view the same fact from another aspect; think of a poorly paid laborer, forced to buy part of his meals at a restaurant, and needing a *quid pro quo* for every cent that he spends, consuming at the same price as he would pay for a real meal the popular "vegetable platter".

Relation of Food-Values and Land-Values

It is inevitable that the ultimate producer of food will raise the best-paying crop for which his land is available, with due consideration for his own skill, the incidental expense of fertilizer and equipment, labor, and transportation. With proper allowance for all these factors, we find a surprisingly close agreement in the receipts

from very varied products and it is still more surprising that the yield in calories for such diverse crops as potatoes, different kinds of cereals, and legumes ranges from 1 to 3 times that of any taken as a standard—about the fluctuation of any one crop according to season, intensity of cultivation, and so on.

Animal products of most kinds also show, among themselves, a somewhat similar narrow range of economic and physiologic yields, but, on an approximate average, are twice as costly to produce in relation to calories, as the vegetable products; however, if we consider the relative value of animal protein as a reconstructive, the relation of economic to physiologic values is fairly close. Fruits and the innutritious vegetables, being subject to demand rather from the standpoint of the palate than of caloric efficiency, are also of higher cost. It must not be forgotten that such articles of diet have a value that can not be measured solely in calories.

It is significant that there is an exaggerated popular conception of the food-value of the latter class of edibles and that the demand for them depends quite as much upon this misconception as on the very questionable appeal that they make to the palate. It is probable that, with popular education as to food-values, there would be a further equalization of the economic demand for, and the price of vegetables in general, so that, ultimately, the real cost of production in capital invested in land, and in labor, skill, and incidental expenses will be standardized to produce an average equality of return, not only in money, but, in genuine nutritive value.

Productivity of Soil, and Population

It is, by no means, foreign to our subject to discuss some details of the supporting value of land with reference to population.

An acre corresponds to a square of between 205 and 210 feet or about 4,300 square feet. The expense of city-life depends to a considerable degree upon the maintenance of streets and yards, while the essential reason for electing city-life implies reasonable concentration of population. Whether the expense of maintaining street frontage is directly taxed at an almost prohibitive rate beyond a fair allowance for comfort in the construction of dwellings and accessibility of premises or

not, very few urban families can afford or really will desire more than a fourth of an acre of land. With reference to income-statistics recently available, we can go so far as to say that not more than 2 percent of the population can afford more than this amount of land in a real city, and that not more than 10 percent, perhaps not more than 5 percent can afford even this amount. With the usual allowances of 5 persons per family, and 1-6 or more of the area devoted to streets, this density of population is about 10,000 per square mile.

The maximum single family to a single house utilization of city area, as in parts of many eastern cities, works out as back to back rows of houses, each about 20 feet wide and with premises about 100 feet deep, 20 families, 100 persons per acre, or 64,000 to the square mile, not counting streets. According as the layout is nearly square or in long rectangles, and, as the streets vary in width and the depth of lots is more or less liberal, that population of such a residence-district will vary between about 50,000 and 60,000 per square mile. With an increase in the size of families or development of boarding-and rooming-houses, the population may be doubled without gross sanitary objections, especially if roofs are used for recreation. By increasing the number of stories within feasible limits and the introduction of flats or by radical departures from the original construction and the erection of apartments of varying size, a population of 200,000 per square mile may be considered conservative.

Population densities of more than 50,000 per square mile are rare for even the largest American and European cities. Statistics are very misleading, for several reasons. Most cities change their boundaries very seldom, working up, from the inclusion of much territory that is nearly rural in type, to a nearly complete settlement, and then suddenly reverting to the former condition, so that comparisons of cities that are essentially of equal density and with the same provisions for growth, may show enormous differences on a technical definition. As cities reach great magnitude of population, they tend to force cemeteries, large parks, railroad-yards and large manufacturing-plants beyond their boundaries; however, different metropolitan cities of comparable populations differ much in these respects. The accidental inclusion

of rivers, bays, et cetera, may, apparently, justify low figures as to density. However, as cities increase in magnitude, there is an imperative demand for greater street-room and more public and semipublic buildings, and there is the spontaneous development of considerable areas given over to business and, therefore, having a permanent population that is insignificant, even though, in working-hours, 5,000 to 10,000 persons may occupy a single block. Thus the tendency toward a high degree of concentration of population automatically checks itself, if we consider the density of population of an entire city.

Cities Should Be Self-Supporting

The amount of land not built upon and theoretically available for cultivation of foods, in the largest cities, is a surprise to one who for the first time has a back-window view after the first impression from the streets of solid masses of masonry. It is altogether likely that even the most densely populated cities could, by utilization of roofs, back yards, parks, and temporarily waste land, and so on, go far toward raising their own innutritious vegetables, as well as eggs and chickens—the objection to the latter being mainly a somewhat inconsistent one as to noise, and a sanitary objection which is but imaginary if proper precautions are observed. Indeed, as the vocal cords of birds are readily accessible, the former objection could easily be removed. If we stop to consider the real reason why fruit-trees are not commonly planted in city parks and streets, we find it to be mainly because of the objection to petty thievery. Obviously, a considerable degree of wisely directed philanthropy and organization of labor would be required for a large city to become self-supporting to even this degree.

The estimate of a quarter acre per family—meaning a lot 30×200 or 40×150 or thereabouts—corresponding to a density of about 10,000 per square mile, actually means an average degree of self-support up to the purchase of sugar, cereals, staple mammalian meats, and imported fruits. Many families actually do reach this degree of independence, with due allowance for the fact that an exact relation of demand to supply can not be maintained in all seasons nor for each particular food-stuff that might be desired. By recourse to goats or the cooperative keeping of cows, even dairy products could be produced

within the city itself, certainly up to the production of butter and cheese.

Even without attempting to raise within a city more than the moderate amount of comparatively innutritious vegetables demanded by the palate and to supply dietetic needs not expressible in calories, only about a ninth of the full ration is of a nature demanding, in the interests of freshness and economy of transportation, local extra-urban production. A good crop of potatoes, 300 bushels per acre, often exceeded under intensive cultivation, though two or three times the average yield under wholesale methods, represents the equivalent of full caloric subsistence for about 5,000 persons per square mile, or the supplemental subsistence of 45,000. A city of half a million could be well accommodated in a circle of 3 1-2 miles radius, or about 38 1-2 square miles area, giving a density of about 13,000 per square mile. Such a city, on the basis of the potato crop mentioned, could be self-supporting—aside from staples for which transportation from a long distance is economically possible or necessary—from a zone extending only half a mile beyond the city limits.

It is scarcely necessary to point out the various practical obstacles to the fulfillment of this theoretic possibility, such as failure to conform to the mathematic maximum of area to the minimum of diameter and periphery, interference by extra-urban demands for land to the exclusion of crops, lack of individual industry and co-operative planning for intra-mural production of foodstuffs, natural factors rendering land unavailable and the like.

It may be allowable, however, to point out that it has been demonstrated on vari-

ous scales, some of them of considerable magnitude of area and population, and for crops—using that term in the broadest sense—of very different kinds, that land can easily support more than 1 person per acre, in addition to the resident human and animal population necessary to its economic intensive cultivation. In other words, the net supporting power of land should be about 1,000 persons per square mile. On this basis, a community along the lines of the old conception of a city-state, with a fairly dense industrial nucleus should be completely self-supporting from a territory of about 14 miles' radius from the common center of the city proper of half a million inhabitants and its agricultural population. With some qualifications, communities of other populations would require dimensions proportionate to the square root of the population.

Some Drawbacks

Such a community would, of course, be somewhat limited in its meat ration, as mammals would, necessarily, be restricted to byproducts of land intensively cultivated. It could not enjoy the wide variety of food available by free importation from large distances nor would foodstuffs be as cheap as when obtained largely from land not available for the other demands made upon it by man. Nevertheless, it would constitute a practically possible community and, indeed, one corresponding in a general way to many actually existing communities, if we go backward either historically or in point of social evolution. At present, it is a concept to be considered as political and economic factors render an approach to it desirable.

WE can . . . approach the consideration of most subjects from an historical standpoint, and the young doctor who thinks that pathology began with Virchow gets about the same erroneous notion as the student who begins the study of American history with the Declaration of Independence." OSLER.

Clinical Studies in Mental Diseases

Dementia Praecox

By LEON E. DUVAL, M. D., Washington, D. C.

Assistant Physician, St. Elisabeth's Hospital, Washington, D. C.

SOME months ago, this magazine published a series of four articles of mine, under the heading of "The General Practitioner and His Relation to Practical Psychiatry." In these articles, I endeavored to emphasize the general practitioner's responsibilities in mental cases, and sketched some of the more common symptoms of mental disorder. The present series of articles is intended to supplement the articles referred to, but, the subjects are to be treated differently, and in such a way as to be useful to those who did not read the first series.

I have always found it rather difficult, from textbook descriptions alone, to gain an adequate conception of any symptom-complex, whether in surgery, internal medicine or other branch. In my brief experience, I have always found the case-study method more satisfactory and by far more interesting and instructive. By this method, one gains a mental picture that is much more easily retained than one obtained from cold textbook presentations. This prompted me to attempt to select some typical cases of mental disease, describing them as they present themselves to the one that sees them first, namely, the general practitioner.

The average practitioner does not realize his responsibility in mental cases—the far-reaching results of his failure to recognize the incipient stages of the various psychoses. Economic losses as well as other damage to the life of the community are caused by the irresponsible acts of these patients; and, the longer these mental aberrations are allowed to go on unrecognized, the greater the harm done. The first symptoms of many of the psychoses are observable only to the trained man; to the layman, they may seem to be mere eccentricity or faulty judgment. Alcoholism, wildcat scheming, crime, any of these may indicate beginning mental disease, and, yet, to the untrained man, are quite compatible with sanity and personal responsibility.

In these cases, as I said in a previous article, the physician's responsibility is,

first, to the public, second, to the patient—and not the reverse, as some of us are likely to believe. Therefore, our responsibility in this type of case is no small thing. The general practitioner sees comparatively few of these cases, so that it is but natural that he should forget his textbook and lecture-room knowledge of mental disease. When he does see such a case, he usually has a rather vague idea of what to look for, what points to observe, what prognosis he can give the relatives, and so on. My idea in preparing these articles is, to present some of the more commonly seen types of mental cases (so far as any mental case can be typical), in the hope that they may leave in the reader's mind certain fairly clear impressions of the more common symptom-complexes. The cases presented are taken from the records of this hospital, revised and abbreviated so as to present only the more important features. In hospital work, we include in our histories many details that would be of little interest to any one except the specialist. Only commonly observed types will be selected, and will include both functional and organic diseases.

Difficulty of Forming an Opinion

It must be borne in mind that there is a great deal of variation in the mode of onset, symptomatology, and course of these cases, because the mind itself is so complex and so entirely individualistic in each and every one of us. However, I shall endeavor to give only the more commonly seen symptoms; to try to remember rare or unusual types is too confusing for any excepting the specialist.

The important things are, first, to recognize mental disease when one sees it, second, to be able to judge the best disposition of the case, and lastly, to be able to make a fairly accurate prognosis.

The art of prognosis in mental disease is more difficult than in any other branch of medicine. Even the specialist sees his judgments proving false time and again. Many a functional disorder have I seen

well on the road to recovery and informed the anxious relatives that all was well, only to see a sudden relapse occur. On the other hand, not a few gloomy prognoses are ultimately belied—many an apparently poor outlook is proved unjustified by the final result. However, experience with many cases gives a sort of intuition, until one formulates for himself certain signs and rules that he can not usually teach others, but, which do guide him in arriving at more or less accurate judgments in these cases.

Precautions To Be Observed

A word as to treatment of these cases. If at all possible, let the patients be treated by a specialist, preferably in an institution. Whether the victims are to be placed in a private sanitarium or a state hospital, depends entirely upon the type of a given case, the probable duration and severity of symptoms, to say nothing of the length of the family's purse. There are many pitfalls to be avoided, and experience is needed to handle, not only the patient, but, his wellmeaning but too-much-in-a-hurry relatives. Relatives are the bugaboo of all who do this work. They fail to understand why we want so much time to treat the case, why we cannot cure the patient with drugs, hydrotherapy, electricity, suggestions, what not. From the day one takes the case, until the day the patient is discharged, one is besieged by the questions and demands of his relatives and friends. In institutions, these relatives are more easily handled than on the outside, nor is it so easy for the relatives to remove the patient before treatment is completed.

I can not overemphasize the fact that we must proceed slowly with these cases. Do not be too ready to let the patient go into the world as soon as all psychotic symptoms have disappeared. Determine whether or not the recovery is to be permanent. The best way to do this is, to let the patient gradually resume his place in the world. First let him visit his relatives a few days at a time. Gradually extend the length of his visits and let him resume his old employment, returning to the institution to report at definite intervals. Only when it is seen that he is quite able to meet all ordinary situations properly, is it safe to discharge the case. I shall again speak of this matter in more

detail under the organic cases. Certain kinds of patients, especially the paranoid, learn to conceal many of their symptoms, so that it often is difficult to say whether a man has recovered from his psychosis or whether he is concealing certain pathological ideas. In these cases, adopt a policy of "watchful waiting," then, if pathological ideas are present, they are most likely to crop out sooner or later. Too often we discharge a paranoid case as apparently cured, only to have the victim promptly returned, he perhaps having, in the meanwhile, committed murder or other serious offense. It is a fairly safe rule to follow that, once a paranoiac, always a paranoiac; possibly with a change of ideas, but nevertheless paranoid.

Study of a Case in Detail

Let us now proceed to the study of the case, a type which makes up no small percentage of the cases that fill our insane hospitals.

The patient, J. C., was twenty-one years of age when first admitted to this hospital. In eight years of school-life, he had absolved only four grades, not, because of defective intelligence, as might be suspected, but, on account of failure to apply himself to his studies with normal interest. After leaving school, he worked at various occupations as an unskilled worker, never remaining more than a few months in any place and earning only very moderate wages. For lack of anything better to do, he enlisted in the army at the age of eighteen. He did not make a good soldier, could not learn his drills, and performed his duties rather indifferently. However, he completed one enlistment, and was in the second year of his second enlistment when put under observation for his mental condition. Just previous to entering the service, he contracted gonorrhea, and had a recurrence in his second year of service. He had practiced masturbation at times since boyhood; his heterosexual life with prostitutes beginning at the age of seventeen. He never had a sweetheart and never was really interested in women.

Following the recurrence of the specific urethritis, which apparently was a very mild attack, he began to show more definite signs of mental disturbance. He gradually became more and more inefficient, until at last he could not perform

any of his duties. Emotional indifference and disturbance of attention and comprehension became manifest. Memory was poor. Hallucinations of sight and hearing later were present. These symptoms brought him under observation and, as a consequence, he was sent to this hospital.

Here, examination showed him to have the same auditory hallucinations. He said that people were reading his mind. More pronounced than either of these symptoms were his somatopsychic delusions. He said that he was suffering from gonorrhea and sore throat, although physical examination failed to reveal either of these troubles. He talked in low tones, was apathetic, and lacked initiative. Physical examination showed that he was very poorly developed, but, otherwise revealed no deficiencies. The urine contained a trace of albumin, while the Wassermann test of the blood was negative. He was discharged from the service, and solicitous relatives insisted upon removing him from the hospital at once.

This man returned voluntarily about two years later, ostensibly for treatment for gonorrhea, in reality, because of a feeling of inefficiency and the lack of ability to maintain a proper contact with the world about him. The mental examination, upon this second admission, proved him to be in the same condition as described above, except that the auditory and visual hallucinations now were absent. Daily he asked for treatment for his gonorrhea, when such did not exist. Two years later, he died, and at autopsy was found to have only one kidney, and that the cause of death was a purulent renal condition.

An Analysis of Case I

To the specialist, the foregoing case presents a common picture. That the man's officers did not recognize the incipient stages of the psychosis, is apparent and it is quite probable that his associates and superiors believed him either lazy or else merely inefficient. In all probability, he was psychotic when he first enlisted, but, the slow progress of the disease did not call attention to the man for nearly six years.

In the simpler types of dementia *præcox*, of which this is a case, the incipient stages often are very slow in their prog-

ress. The gradually increasing inefficiency, with a tendency to seclusiveness, plus a barely observable intellectual deterioration are the first symptoms to make their appearance, and, unless one is aware of their import and is looking for them, they are likely to escape attention.

Briefly summarized, the foregoing case presents the following picture:

A boy of 21, a failure in school, more or less inefficient all his life quite unable to adapt himself to army life, gradually becoming more and more apathetic, emotionally deteriorated, until eventually totally unfit to care for himself. Examination revealed the before-mentioned hallucinations and delusions. Please, mark especially the delusion concerning his having gonorrhea. To the psychiatrist, especially the psychanalyst, this latter symptom tells a whole history. In all likelihood, this delusion is an "idea of grandeur," a psychic compensation for a partial or complete sexual impotency. And in that impotency lies the precipitating factor of the psychosis, when added to the congenital constitutional inferiority. The collective picture is that of hebephrenic dementia *præcox*—the diagnosis made in this case.

Deductions

This one represents a comparatively simple case, yet, one from which a number of suggestions can be derived. When in an individual of from (approximately) eighteen to thirty or thirty-five years, we find a history of continual failure to find his niche in the world, a lack of ability to become efficient in any place, one begins to think at once of constitutional inferiority, and to suspect the existence of dementia *præcox*. If, furthermore, we find the individual to be seclusive, eccentric, avoiding the society of the opposite sex, or, if interested in them, failing to prosecute a really successful love-affair, then we grow even more suspicious. If, again, there is a history, one of a too close dependence upon one or the other parent, we are still more justified in believing that we are dealing with a case of incipient dementia *præcox*. If now we find the patient becoming apathetic, failing to show appropriate emotional reactions to such stimuli as the death of loved ones, financial failures, or to the other stimuli that ordinarily produce in us feelings of sorrow or joy, together with gradual failure of attention and compre-

hension, we then will be quite justified in making a diagnosis of dementia praecox.

Of course, this picture is only one of many seen in this disease, but, it is perhaps the most common mode of onset of the hebephrenic, and is, in its incipiency, one of the most difficult to diagnose.

As to Prognosis

In case one arrives at this diagnosis, what is the prognosis? What is the probability that the individual will recover sufficiently to resume his place in the world again?

First, always be guarded in your promises to the relatives. In giving your opinion as to the outcome of the case, always leave yourself a loophole to provide for whatever the end finally may be.

Remember that this type of the disease is liable to become chronic, with progressive intellectual deterioration. Remember, also, that there are cases which exhibit typical hebephrenic symptoms, yet, rapidly recover. In giving my opinion to relatives, I get around the matter in some such fashion as this:

"This patient," I say, "is suffering from a functional mental disorder known to the profession as dementia praecox." I then briefly explain what is meant by the term "functional." "This disorder is essentially chronic and progressive, with a tendency to gradual failure of the mental faculties. However, there are some cases that end in fairly good recovery and the subjects are able to return to the outside world. In such cases, there is a tendency to recurrence of the disorder. In your relative's case, the outcome can be determined only by careful watching, extending over a period of weeks to months. The outlook as to life and physical health is good, although in the older, more deteriorated cases, the patients are quite susceptible to intercurrent diseases. If you wish to do the best thing possible for the patient, leave his care to the physicians—as a rule, it is best for the patient not to see relatives too often. Be patient, for the improvement is a slow process, at the best. I shall not make any definite promises: the patient may get better or he may not, which way the case will turn only time will tell."

It often is necessary to explain to relatives the nature of the patient's delusions, especially if he has paranoid ideas directed

toward his immediate environment. It is distressing to the relatives to have a patient say that the attendants abuse him or that other patients persecute him. If a patient has such delusions, we must explain to the relatives that these ideas are only symptoms of the disease. This is true also of somatopsychic delusions. The relatives may be led to believe that the patient does not receive adequate attention to his physical state. Always be frank with the relatives, for, by so doing, you win their confidence—which it is very necessary to enjoy. In the remissions that sometimes occur in this disease, the relatives are only too ready to believe that the patient has recovered, and it is hard to convince them otherwise, unless you have won their absolute faith in your knowledge of the case.

In my description of the symptomatology, I have omitted the hallucinations and delusions, the bizarre ideas and grotesque behavior which are typical of the hebephrenic type. However, these are later symptoms as a rule, and, at any rate, they attract the attention as the simple apathy and seclusiveness will not. The first-named symptoms, minus the hallucinations, delusions, and so on, if continued, lead to the simple dementia type, in which the prognosis is still less favorable than in the hebephrenic type.

A Special War Type

There is a special type of dementia praecox now being frequently observed in army and navy hospitals. It is seen in boys of eighteen to twenty-five years, and consists of episodes of a few weeks to a few months' duration, in which typical dementia praecox symptoms are present, but clear up rapidly, especially upon their removal to a psychiatric ward and discharge from the service. In these cases, the prognosis seems to be especially good, although we have not as yet had time to determine whether the recovery is permanent.

The basic factor in this special type seems to lie in a lack of adaptability to service conditions. It is most frequently encountered in latent homosexuals, to whom any condition that calls for constant contact with the same sex acts as an irritant to the homosexual conflicts that lie under the surface of consciousness, and which the victims are able to suppress

when in ordinary surroundings, but, are unable to do so in a homosexual environment like the army. By the term "homosexual environment," I mean, not contact with homosexuals, but, an environment consisting wholly of one's own sex—in this instance, men.

In the early stages, it is impossible to tell whether the patient will have one of these brief episodes, or whether he will become a chronic one. Only time will answer this question.

Differentiating Between Psychoneurosis and Incipient Dementia præcox

The differential diagnosis between a psychoneurosis and incipient dementia præcox often presents another difficult problem. One in constant contact with both types is able to see certain subtle differences that are not observable to the untrained man, and these differences are learned only by a sort of intuition born of experience, while difficult to teach to anyone else. If one is uncertain as to a diagnosis, it is best for all concerned to consult a specialist—and let him share the responsibility. If one does not do this and makes an incorrect diagnosis, with a resulting false prognosis, he lays himself open to criticism by the patient's friends. In any case that becomes chronic, the relatives are but too prone to lay the blame upon the first physician that treated the patient. I frequently hear such criticisms as this: "If Doctor Blank had understood the case, John could have been cured in a short time." And it is difficult to make people believe that no known treatment could have affected the course of the disease in the least.

The Treatment

Coming now to the question of treatment of incipient dementia præcox, I advise the average doctor to turn over such cases to a specialist. If the patient's family is in moderate circumstances, it is better to have the patient committed to an institution. Care of such victims in the home is rather expensive. Again, most of these cases do much better if removed from the home atmosphere. In the early stages, psychoanalysis by a well-trained analyst may be of considerable assistance. On the other hand, in many cases, treatment can do little or nothing, except that one tries to influence the patient's behavior and to keep him occupied in such a way

as to make him do as much and as efficient work as possible. Occupational therapy plays a large part in the treatment of these cases, but, psychotherapy should not be neglected.

While we can not make a psychoanalysis in every case, much can be done by sympathetic, understanding talks with these patients. Whether one is a follower of Freud and his theories or not, if he studies these cases carefully, he will find psychosexual conflicts at the bottom of most of this type of cases. I do not mean sexual in the grosser sense, although in some of the cases the sex-problems present consist of plainly indicated repressions of definitely known perverted sexual desires. However, most of these sexual conflicts present are not of this type, but, rather, of the unconscious conflicts due to the effects of former sexual trauma, the repression of infantile or adolescent phantasies, and so on.

In cases not suitable for analysis, some benefit may be derived, at times, from an intelligent discussion of his condition with the patient. However, great tact must be exercised in such discussions, else the physician may find himself the object of a blind hatred on the part of the patient: for, lack of tact may mean the stirring up of tender points which the patient is trying to forget, and which make the psychic struggle more difficult than ever.

In the first weeks of treatment, it often is necessary, for the patient's sake, to prevent the relatives from visiting him. However, there is a limit to our right to do this, and, unless sufficient improvement occurs to warrant this measure, we must not forbid these visits. At times, we find that the visits of relatives have a distinctly irritating and harmful effect. Especially is this liable to be so when the patient is trying to develop a self-reliance that has been crushed by the well meaning but utterly foolish attempt on the part of the parent to protect the patient from all unpleasant stimuli.

Hydrotherapy is useful in some instances, it must be administered, however, by trained people in order to obtain the best results. No two patients require the same treatment, this having to be prescribed for each patient individually.

More points might be brought out, but will be left for a later article.

[To be continued]

Diseases That Are Transmissible from the Domestic Animals to Humans

By 1st LIEUT. G. H. CONN, V. C., U. S. ARMY, Camp Zachary Taylor, Kentucky

IN the pursuit of the medical art, our work and purpose is the lessening of pain, the relieving of conditions and the prevention of those diseases to which the members of the race are susceptible; and recognizing this as our duty, it seems that any knowledge or any suggestion that might be of utility to us would be gladly welcomed, regardless of its source. The last few years have brought forth many new things in the field of comparative medicine, and medical men generally have been glad that things have developed thus. A great many regular practitioners of note have said that they often derived knowledge, that was both interesting and useful, from contact with veterinarians standing high in their profession, and veterinarians have adopted many things from human practice.

In presenting the subject named in the title of this paper, it seems that it may prove of interest, if not profitable, since some practitioners may, some time, be confronted by just such conditions. If then no competent veterinarian can be consulted, these few remarks of mine may chance to be of some value.

In a recent issue of *The Veterinary Review*, it is recorded that a woman in Philadelphia died a few weeks ago from the effects of anthrax, that highly infectious disease of horses and cattle and that just a few months ago a young man at Columbus, Ohio, who was one of the professors of Veterinary Medicine at the State University, met death from that other dread disease, glanders, a highly contagious and infectious disease of horses. Thus it behooves all physicians to be alert and ever on guard against just such conditions as those instanced. It is possible that many people have died from some one of the diseases contracted from domestic animals, and, that, owing to the rare occurrence of them among humans, the attending physician may have failed to recognize the condition.

Most of the conditions that are trans-

mitted from animals to men are of a very serious nature, and the mortality from them is very high; serum-therapy has enabled us to reduce the death rate of one of the most distressing ones (and in which the mortality was very high) to a very low figure. I refer to rabies. Since the Pasteur treatment for this infection was inaugurated, hundreds of lives have been saved each year through its instrumentality.

Anthrax

Anthrax is a highly infectious disease of cattle, and horses, principally, but, occasionally hogs, sheep, and dogs will contract it. This condition is characterized by an acute swelling of the spleen and by hemorrhagic infiltrations of the subcutaneous tissues. It is caused by the bacillus anthracis, which is very easily killed; but, under favorable conditions it produces spores that are capable of living in moist inundated lands, so that this disease usually is contracted in the summer time after a warm rainy spell. The blood of animals dead from anthrax is very virulent, and the feed for animals often is infected through that source, especially when the hides of animals are dried in the loft. Animals often take up these spores with the water they drink or with the vegetation grown upon infected soil. Sometimes these bacilli flourish in shallow springs or ponds, whence the animals take them with their drink. This infection is rarely, if at all, transmitted through the milk supply, as the flow of the milk is arrested early in the course of the disease.

The blood of animals dead from anthrax remains in a fluid condition, for which reason the carcass decomposes very rapidly. The blood is dark in color and escapes from the natural orifices; the carcass becomes greatly bloated and the rigor mortis is incomplete. Hemorrhagic and cyanotic mucous and serous membranes and swollen lymph-glands are characteristic.

Anthrax usually develops in from three to ten days. The animal usually shows loss of appetite and stands with a staring

look, or, if left to itself, it may lie down a great deal, while, if made to rise, it will be found to sway and stagger. At this time, it will show all symptoms of an acute infectious disease, the mucous membranes will be hemorrhagic and cyanotic, the animals may show signs of pleurisy and laryngitis, and have diarrhea the stools containing large masses of blood. The flow of milk almost ceases and what little is yielded is dirty-yellow in appearance having a bitter taste. Pregnant animals are liable to abort.

Animals may succumb in from one-half to one hour or they may live for as long as two days, while, in exceptional cases, they have been known to survive seven days. Mostly, however, death follows quickly.

In man, anthrax ordinarily occurs as a local infection of the skin and subcutaneous tissues. It usually is contracted by persons working around dead animals or handling hides, wool, hair, et cetera.

The development of the carbuncle usually is initiated with a very severe pain, followed by a bright-red nodule, this changing to a blackish-red, and becoming filled with a red serum. This stage is followed by a breaking-down of the tissues and the formation of new nodules and vesicles. Surgical treatment occasionally will arrest the progress of this local condition if undertaken early enough. Death results from septicemia. The intestinal infection manifests itself by severe inflammation of the intestines, chills, vomiting, and collapse, besides severe abdominal pain.

Variola, or Vaccinia, or Cowpox

This is a disease that may be transmitted from animals to man, but, is more often transmitted from man to the cow. It has been observed very frequently among cows after children and grown folks had been vaccinated.

The condition manifests itself only at the site of infection or in the area immediately surrounding it. The general disturbances are but very slight. Young cattle are the most susceptible to it.

As a rule, the infection is conveyed to healthy herds by the hands of a vaccinated person doing the milking. It is sometimes transmitted from cows to those milking them; however, contaminated straw, hay, and stables also play an important part. It

is very likely that true human smallpox may be transmitted to cattle, still, this has not been proven. An attack of the disease usually is noticed in four to seven days after infection, and the slight febrile symptom even may pass unnoticed. The appetite is slightly impaired; the udder of the animal is sensitive and the teats are abnormally warm and slightly swollen. In two or three days more, there appear on the teats and the udder small, hard nodules, changing in a day or two to small vesicles filled with lymph. The color of these vesicles depends upon the thickness of the skin and its own color; but, from the eighth to the eleventh day, they show in their centers a well-developed depression. The contents of the vesicles then become purulent and on drying, form scabs. Ordinarily, vesicles are few in number, not to exceed fifteen or twenty. Because of the milking and other traumatic influences, the course of the disease is greatly changed, and the area where the scab has dropped off may become infected; for this reason it may take from thirty to forty days before these vesicles are healed.

The cowpox-lymph, as used for protective vaccination against true smallpox, has become commercially so reliable that many countries have passed laws compelling everybody to be vaccinated, in order to avoid true smallpox that is so fatal to the human family.

Foot-and-Mouth Disease

Foot-and-mouth disease—or aphthous fever, as it is also called—is an acute infectious and contagious disease of the cloven-footed animals. In some rare cases, horses, dogs, cats, and even poultry are said to have been affected with it. The large herbivorous animals are susceptible, including camels, elephants, and the like. It also is transmissible to man; however, this infection takes place, as a rule, through the use of the milk and then rarely is fatal, although, in some outbreaks, several deaths have been attributed to it.

The germ causing this disease has not as yet been discovered, but, is classed with what are known as the ultramicroscopic filterable viruses. The virus has been known to retain its virulence for a long time in stables and manure piles and in and on the bodies of animals that have previously been affected. It sometimes

will retain its virulence in hay, fodder, and grain.

This virus is carried in many ways and much easier than is the virus of the ordinary infectious diseases. It is most surely carried by infected animals from one to the other, or on the boots and clothing of persons; also by the small animals, such as house-pets and the smaller wild animals, as also by hay, grain, straw and fodders.

It is a supposition among the lay people that animals attacked with foot-and-mouth disease are immune to it after having recovered; still, experience has shown that this is not so, but, that an animal may subsequently be affected after a few weeks and as many as two or three times within a year. The herd seemingly may recover and then, after several weeks, the disease breaks out again. Animals have been known to transmit the infection as long as two years after they have recovered from it. On account of these virus-carriers, it is dangerous and unprofitable to attempt to control this disease by means of quarantine alone. Following the outbreak of 1902 and 1903, some herds in the eastern part of the United States were not slaughtered, as they seemingly had recovered; but, these cattle afterward did so poorly that the Bureau of Animal Industry of the United States Department of Agriculture was requested to destroy them. It is impossible properly to disinfect premises as long as the diseased cattle are upon them, for which reason it is advisable to kill them.

It may be well to mention here that at times a malignant type of this disease makes its appearance, when the mortality is very high.

The period of incubation is variable, in most cases, though, it is from two to five days, and may be as short as one day or as long as ten or twelve days.

The infection mostly is conveyed to man by the use of raw milk, while in rare cases it may also be transmitted to infants, and these occasionally prove fatal. The first symptom that is noticed is, a mild fever, followed by a feeling of dryness and warmth in the mouth, and this may be followed by vomiting; the mucous membrane lining the mouth and lips become reddened, after which the formation of vesicles takes place, and these soon burst and leave a

raw, denuded surface. In addition, there may occur headache, dizziness, diarrhea, and general depression.

Rabies (Lyssa)

This condition is also known as hydrophobia or canine madness. It is an acute contagious and infectious disease of dogs and cats, and of foxes and wolves, and also of the herbivorous animals in general, which latter usually contract the disease from being bitten by dogs. It nearly always results in death. Since the discovery of a specific treatment, by Pasteur, the mortality has been very low, indeed. The infective agent is one of the filterable ultramicroscopic viruses and has so far remained hidden to the army of scientists that have labored to discover the effective cause.

Rabies is found the world over, but, there are a few countries now that have been free from it for several years. Among these, are England, Denmark, Norway and Sweden. So far, it has been impossible to isolate and cultivate the micro-organisms on any artificial culture-medium, whence it may be supposed that it grows only in living tissues.

The finding, by Negri, in 1903, of those cell-inclusions in the large ganglion-cells of the hippocampus major and of the cells of Purkinje, in the ganglion-cells of the cortex of the cerebrum, the pons, and the medulla, and sometimes in the spinal cord, has made the diagnosis of this condition fairly reliable and accurate.

The natural infection is brought about, usually, by the animal or man being bitten by an affected animal, the virulent saliva being introduced into the wound and the injured tissues and nerves. It is maintained by good authorities that the saliva may be infectious as long as eight days before the appearance of the first symptoms of the disease.

The danger from a bite is in proportion to the extent of the injury and also the depth, the amount of clothing that is worn or the thickness of the hair of animals over the wound, as also the character of the teeth of the animal that inflicted the bite. Cats and dogs make a much worse wound than do some of the other animals. A deep wound made with sharp teeth does not bleed out very well, and, so, it is very difficult to get rid of the infection. About 30 percent of animals bitten by a rabid

animal will contract the disease, while cattle and sheep may run as high as 50 to 80 percent.

After gaining access to the body, the virus finds itself along a nerve-tract, and in this way brings about the peculiar train of symptoms that are observed in this condition. It is thought that, where the condition hangs on for several days after the virus has reached the central nervous system and the spinal cord, it may, in time, pass to the nerves of the opposite side of the body.

The length of the period of incubation of rabies seems to be longer than for almost any other disease, while also seeming to be as variable, according to the opinion of different authorities: The period of incubation is given as from two weeks to about two years. It is more than likely that, ordinarily, you will observe, in most cases, that this disease develops in from two to eight weeks after the bite of a rabid animal; very long periods of incubation may occur in a few instances, but, after several months have elapsed, there is a very good chance for reinfection from some source that may have escaped detection.

In dogs, we very often find, in the beginning of these attacks, that the animal becomes melancholy and does not obey its master as willingly as before and will crawl away into some dark place and remain hidden. It even may scratch the floor and seem to be excited from some imaginary cause. At this time, there will be noticeable some difficulty in swallowing, and the animal is unable to drink much and sometimes has difficulty in voiding urine and feces. The free flow of saliva usually is very noticeable at this time. In short, the animal's disposition seems to be changed almost completely during this stage of the attack.

In from one-half to three days the stage of excitement sets in. The behavior of the animal is greatly changed. It becomes very restless, and, if in a room or kennel, it will make every effort to get outside. It will suddenly become aggressive and will fight every other dog to which it can get, and will attack other species of animals if it can get loose. Usually, it will wander off on a long trip at this time fighting with every dog encountered. The dog will not attack persons, unless they get in

its way. The throat is wellnigh paralyzed at this time and the animal can drink little or not at all. When the rabid dog is fighting with other dogs, it may be noticed that the other dog is howling, while the rabid dog utters scarcely any sound at all; or, if any, it is a sort of coarse, hoarse growl. The bark of dogs at this stage of the disease has a peculiar sound, caused by the paralysis of the muscles and nerves of the throat. It is somewhat of a double sound and is accompanied by long, drawnout howls. After one becomes familiar with this bark, he many times is able to suspect a case of rabies merely from hearing the sick dog bark. At this stage, the dog will not try either to eat or drink. Some animals even tear the flesh from their own bodies and especially from the seat of the injury. This stage of excitement lasts between three and four days, and is then followed by the stage of paralysis.

The paralysis and the periods of depression become more pronounced, and the lower jaw becomes paralyzed, the tongue protrudes from the mouth, paralyzed, and the saliva runs from the mouth in long strings. The nerves of the other parts of the body rapidly become affected. The hind-legs become involved, the animal staggers, and eventually is unable to walk. At this time, the animal may attempt to drag itself around with its front feet, but, very soon this becomes impossible, and it lies helpless. Death usually occurs in convulsions.

There is a great variation in the clinical picture of rabies and the stages do not always occur in the same order.

Cats frequently are affected by this same condition; horses also are subject to it, as are also cattle, sheep, goats, and swine.

The disease ordinarily runs its course in from three to thirteen days; most of the cases ending in from four to seven days. Recovery is very rare, still, it has been observed.

When people have been bitten, it is best to keep the animal under observation until it dies a natural death rather than to kill it. If one has the opportunity of observing the animal through the greater part of the disease, he will be able to arrive pretty closely at a correct diagnosis. If one is at all uncertain, it is best to have a microscopic examination made. Diagnostic-inoculation also may be made with

other animals, and this is a reasonably reliable way after one has had the necessary experience in this kind of work.

By ridding the country of all ownerless and straying dogs, and having in force compulsory muzzling-acts and by quarantining all suspicious cases for at least three months and destroying all known and suspected infected animals, it is possible eventually to eradicate this scourge.

A person affected with rabies will first experience itching and trembling in the bitten part, and also some fever, respiratory troubles, difficulty in swallowing increased salivation, reflex excitability, and delirium. These are followed by paralysis of the muscles of the throat and tongue, followed by those of the muscles of the extremities. Since the introduction of the antirabies-vaccination of Pasteur, the mortality has been reduced to less than 1 percent, being most favorable in bites about the limbs, and more dangerous for those about the face and head. The earlier the vaccinations are begun, the better. It is now possible to apply this treatment to horses and dogs.

Glanders

This disease is known also as farcy or malleus. It is a contagious and mostly chronic disease of horses. Man will become affected from contact with the virus. It is characterized by the formation of nodules, which degenerate and give rise to characteristic ulcers.

Glanders has been known from the earliest time and was very prevalent in nearly every part of the world; however, since the introduction of mallein as a means of diagnosing this condition, this has made possible the control of the disease in many of the countries.

The disease is caused by the bacillus mallei. Cats and dogs, and sometimes sheep, goats, and swine can be artificially infected, while cattle are virtually immune.

Ordinarily, the disease is acquired through contact with the secretions of the animals. The bacillus often is found only in those organs, and their secretions, that are affected, such as the kidneys, in which latter case the feces would be infectious. The secretions from the nose and from the ulcers are very infectious. The bacilli will maintain their virulence for some time, if lodged in a dark, damp place and protected

against drying. Most animals become infected from feeding, from the same trough or from the same feed-boxes near which glandered horses have been. The disease is contracted especially through the feed and water of the animal, and it usually is introduced into uninjected stables by a diseased new or strange horse. By the aid of the mallein-test, cases of glanders may now be detected where no clinical suspicion of the disease exists.

There are several methods by which this condition may be diagnosed; the principal, and best being the mallein-test. However, it can be discovered by microscopic examination, cultures, animal-inoculations, complement-fixation test, et cetera. The ophthalmic mallein-test is the one that is being the most widely employed just at present. It has the advantage of not interfering with the subcutaneous mallein-test, if the ophthalmic test is not satisfactory.

No treatment is attempted in these conditions, but, the animals should be isolated and destroyed at once and the other members of the stable be quarantined, while the stable and all the harness and blankets used about the diseased animals should be destroyed or thoroughly disinfected. Quarantined animals should be kept under observation for some time and should be repeatedly subjected to the test at proper intervals, so as effectually to stamp out this malady.

In man, glanders usually occurs most frequently when the infection gains access directly into the lymph-glands or vessels or into the submucous or the subcutaneous tissues or, finally, directly into the blood stream.

It may develop into an acute or a chronic type. When it is acute, there usually will be found a small nodule at the point of infection and the surrounding tissues will become edematous and the afferent lymph-vessels will be swollen and painful. The nodules frequently develop into ulcers and extend over large areas of the body. The disease may affect the mucous membrane of the nostrils, and a catarrhal discharge may be present—an affection of the larynx and lungs. Chills and fever, as also muscular and articular pains are manifested at this time; cough as well as difficult respiration and deglutition indicate affection of the larynx and the lungs.

Death usually supervenes in from two to six weeks.

In the intestinal form, glanders simulates typhoid fever; but, the continuance of the fever beyond the third week and the appearance of pustules over the body makes the differential diagnosis possible.

In the chronic cases, the victims have the nodules and ulcers, and these often heal and then break out again after several weeks or months, and these patients many times will recover completely. The condition may become acute, however, and end in death in a short time. Still it has been known to persist for as long as eleven years in human beings.

Tuberculosis

We have come to that condition that interests us more from the standpoint that we are occupying in discussing these diseases at this time. Tuberculosis has received more consideration at the hands of great medical men and bacteriologists of the world than have all other diseases combined. Vast sums of money are being spent each year in studying tuberculosis and the means to prevent as much of it as possible. Almost every paper that one picks up contains something appertaining to the "great white plague," either about some cure or some sanatorium or some martyr to its ravages. It is a disease that is dreaded by all, owing to its slow insidious, but, certain death, and to the suffering that is sure to ensue during its progress. It is not a respecter of persons, but, we do know that people that live under unsanitary conditions and are poorly fed and clothed, and that are compelled to do work for which they are physically unfit are very good subjects for this dreaded malady.

Tuberculosis is a disease that has been demonstrated to obtain in almost, if not every, species of animal that inhabit the globe. It is one of the oldest diseases of cattle as well as of human beings. It has been recognized for centuries; although the cause of the condition has been known only for a few years.

Tuberculosis is more common among the cattle of this country than most people are aware. It becomes disseminated by the buying and selling of cattle and moving them from one place to another. This traffic in diseased cattle or, in other words, in tuberculous cattle, has been going on

among some unscrupulous dealers for several years and ultimately has become so great a menace to the cattle industry that many states have placed a quarantine against dairy-cattle from these known badly infected districts. These cattle have been subjected to the tuberculin-test and have reacted, and then have been sold under false tuberculin-test certificates issued by unscrupulous veterinarians and also by some dealers.

It has been a disputed point for several years among the scientists, as to what relation the tubercle-bacillus that produced the condition in cattle and the one that produces the condition in humans really bear to each other; and it now seems to be the opinion of many of the great medical men that the bovine type can, and, in some instances, does affect human beings. It is a fact conceded by many doctors of note that a large percentage of the cases of tuberculosis in infants are consequent upon the bovine type of the bacillus, which are ingested with the milk: from tuberculous cows. It is more than likely that each year in the United States several hundred infants die from tuberculosis from the use of tuberculous cows'-milk.

It does seem to me that wide-awake, intelligent people such as we have in the United States would demand competent and thorough inspection of the milk, especially that which is being used for infant feeding. The poor of our cities who must bottle-feed their babies can not help themselves, as they are not in a position financially to procure a milk that they are sure is free from contamination and disease-germs of various kind. It is claimed that the death rate for babies whose fathers earn less than \$10.00 per week is 258 per 1,000, while the death rate for those babies whose fathers earn \$25.00 or more per week is 84 per 1,000. If this is true—and I personally do not doubt the correctness of it—it seems that many of us could find plenty of opportunity for our surplus energy in making an effort to bring about a better condition for our people and especially for the babies of our larger cities.

It seems, since it has been demonstrated that it is an easy matter to detect tuberculosis in cattle by applying the tuberculin-test, that we owe it to our people to do all within our power to see to it that as many of our cattle as possible are free

from the disease, especially those that yield the milk for human consumption.

I have not attempted to say anything extended concerning tuberculosis in animals and its transmission to man, because I feel that tuberculosis has received so much

thought and investigation at the hands of the medical men that they, as a rule, are very well acquainted with the condition, and, besides, any description worthy of the name would occupy too much space for this paper.

Hypothyroidism Cured With Thyroid Therapy

An Interesting Case

By M. B. ALLEN, M. D., Atlanta, Georgia

Assistant Professor of Pathology and Bacteriology, Atlanta Medical College (Emory University School of Medicine), Atlanta, Ga.

PATIENT: Mrs. J. N. T., of Hoschton, Georgia, housewife, age 52, married, weight 240 pounds. When asked her chief complaint, she replied: "Doctor, everything is wrong with me. My head aches, my appetite is poor, I cough up blood, I do not sleep well, my heart flutters, I am constipated, I can not get out of bed without help or walk without two people holding me up, and I get fatter and fatter every day."

Family history: Father died, at 78, from an accident; mother is living and in fair health, aged 89; four brothers are living and well; two brothers are dead, one from typhoid fever, at 35, one from Bright's disease, at 56; four sisters are living and in good health, except one, who suffers from occasional attacks of asthma; one sister died, at 45, incidental to the climacteric. Cases of tuberculosis, malignancy, diabetes, arthritis, pellagra, acute rheumatic fever, and nervous and mental diseases are denied to have occurred.

Patient's past history: Born and reared in north-eastern Georgia; always had been unusually active and enjoyed splendid health until the present illness began 27 years ago. Measles, whooping-cough, scarlet-fever and chicken-pox were her only childhood diseases; recovery from all was complete, without any complications or sequels. Other diseases of any kind, operations, and accidents are denied. Patient has been married 29 years. Husband is living and in fine health; has one child, aged 27, and healthy; also one grand-

child, aged 4, and healthy; had no miscarriages. Her menstrual history is negative. The menopause occurred six years ago.

Present illness: This dates from the birth of her child 27 years ago, at which time she was confined to bed for one month with "childbed-fever"; never since having regained her former health. Her weight previous up to that time was around 150 pounds; but, since then she has never been strong and has gradually been gaining weight and losing strength, until at present she is practically helpless and very weak. She has done no housework for a number of years, been unable to wear a corset for the past fifteen years, can not sit down in an ordinary chair (because of her bodily bulkiness), has spells of despondency, passes blood from the rectum, can not eat solid food, owing to the looseness of her teeth, has indefinite pains throughout the body, and complains of all the things mentioned already.

Habits: She has nocturia (2 or 3), does not sleep well, uses neither coffee, tea or drugs. She eats regularly, although her appetite is not good and she is constipated. She worries a great deal. The environment is an excellent one and her standing, socially, the highest.

Physical examination: The patient is an unusually large woman presenting an apathetic look and having a bloated appearance; movements are slow and awkward; her speech is slow and indistinct. She is lying propped up in bed, being troubled

with a slight dyspnea. Her hair is dark, dry, thin, and brittle. The skull is symmetrical and well developed. There are no nodes. The scalp exhibits nothing abnormal.

Facies: The woman's physiognomy is remarkably altered; the skin has a yellowish tinge, is rough, scaly, and dry, and the lines of the facial expression are completely obliterated, thus giving rise to a puffy, bloated, masklike expression of the face. The lips are thick and everted; teeth are carious and loose, alveolar pyorrhea being marked; the gums bleed when touched; the breath is foul; the mucous membranes are pale; the tongue is furred, protrudes in midline, completely fills the buccal cavity, and it shows the indentations of the teeth. The papillæ of the tongue are hypertrophic. The voice is harsh and barely rises above a whisper. The pharynx seems normal. The temperature is 97.4° F.

Eyes: The pupils, regular, react to light, and accommodate properly. There is no limitation of the movements of the eyeball. The field of vision is somewhat contracted. The palpebral apertures are about two-thirds closed, thus giving a sleepy, dreamy appearance to the eyes. The conjunctivæ are pale and injected. The eyelashes and eyebrows are intact, but, thin. There is a slight gross disturbance of the vision.

Ears: Gross examination discloses nothing unusual, although hearing is somewhat impaired.

Nose: This is large, broad, and thick, giving to the features a very coarse look.

Neck: The thyroid gland is not palpable. There are no palpable glands, nor is there any throbbing or stiffness. There is, though, a marked swelling of the subcutaneous tissues, which hang down in great folds anteriorly.

Thorax: The thorax is symmetrical, well developed, and very large. Expansion is limited bilaterally. The intercostal spaces are obliterated by a firm, inelastic swelling, which does not pit on pressure. The respirations are 24 per minute, rhythmical, but, slightly labored. There are great masses of fat in the supraclavicular regions and over the cervical vertebrae. Cardiac dulness is slightly increased in all diameters. The apex-beat is somewhat diffuse, but the point of maxi-

mal impulse is located in the sixth intercostal space 1 Cm. outside the midclavicular line. The sounds are indistinct, but no murmurs are audible. There appears to be an accentuation of the aortic second sound. There is slight arrhythmia. The lungs are clear, except for a few fine moist râles at both bases posteriorly.

Abdomen: It is protruding and tympanic. No masses, rigidity or tenderness are encountered upon palpation, which latter is markedly interfered with because of an enormous thickening of the abdominal walls. Hepatic dulness is increased several Cm. in the vertical diameter, but, not felt below the costal margin. I can not palpate the spleen.

Extremities: The skin is dry, rough, and scaly. Joint movements are limited. The hands are broad and relatively short and their backs are markedly hyperplastic in comparison with the palms. The patient can not close her fists while the grip is extremely weak. The radial pulse runs 65 per minute and is arrhythmic. The systolic blood pressure equals 165 mm. of the mercurial column. The epitrochlear glands are not palpable. The lower legs present a dense, inelastic swelling which does not pit upon pressure, except around the ankles, where there is slight pitting. Locomotion is impossible without the aid of two assistants. The slightest exertion causes dyspnea.

Mental state: Mental hebetude marked. Memory for remote events is good; for recent events, it is defective and inaccurate. Patient is despondent, suspicious, irritable.

Reflexes: These apparently are normal, but the sensations are dulled.

Laboratory findings: Sputum, negative for tuberculosis. Blood, negative for plasmodia. (This is a malarial district). Erythrocytes, 3,100,000; leukocytes, 5,800. Polymorphonuclears 53 percent. Small mononuclears, 27 percent. Large mononuclears, 12 percent. Transitions, 1 percent. Eosinophiles, 2 percent.

Feces: Negative for parasites or ova; positive for blood.

Urine: 800 mils, acid, clear, amber-colored, trace of indican, albumin present. Sugar, none. Many hyaline and granular casts.

Diagnosis: Hypothyroidism (myxedema).

Treatment: Daily warm baths were given. The patient was placed upon thy-

roid extract, 0.10 Gram three times a day for a period of one week, at the end of which time the dose was increased to 0.25 Gram three times a day. She lost 10 pounds at the end of second week. During third week dose increased to 0.3 Gram three times a day and a high-protein diet was prescribed. During the fourth week the dose was increased to 0.40 Gram. During this week, symptoms of thyroidism (tachycardia, sweating, nervousness, and so forth) developed, whereupon the drug was stopped for a period of one week. An attack of fainting ushered in the symptoms of thyroidism. At the end of the week of rest (from the extract), she was given 0.10 Gram three times a day, and this dose was steadily maintained. At the end of the 25th week, she weighed 175 pounds (a loss of 65 pounds), and now is feeling perfectly healthy. She walks like a normal individual, does her

housework and handwork, has a good appetite, is cheerful, takes prolonged rides, sleeps soundly (free from nycturia), complains of no cough, nor headache, nor weakness, nor dyspnea; eyesight and hearing are improved; wears a corset, speaks perfectly and distinctly, and says that "the past seems like a dream" and that she "feels as though she were but sixteen years old," complaining of nothing whatever.

Her white- and red-cell counts are virtually normal and hemoglobin registers 90 percent. The urine still shows a trace of albumin with few hyaline and granular casts, but, is free from indican; systolic pressure equals 160 mm. Hg., the cardiac sounds are distinct and regular. She eats solid food (her teeth no longer being loose), and her mental condition seems virtually normal.

The melena was caused by hemorrhoids.

Note on the Possibility of Nonvenereal Contraction of Gonorrhea

By G. FRANK LYDSTON, Chicago, Illinois

A PROPOS of the method of contagion in gonorrhea, considerable illogical reasoning has been indulged in regarding the possibility of infection in an innocent manner. Syphilis *insontium* is well recognized; but, whenever an individual having gonorrhea gives a history of an unknown or innocent source of infection, the account usually is treated with lofty disdain and contempt, born of a profound knowledge of human nature—particularly as manifested in connection with venereal diseases.

Theoretically, at least, gonorrhea is more likely to be contracted innocently than is syphilis. Limitation of innocent infection is owing to the fact that the structures susceptible to gonorrhea are of comparatively small area and relatively inaccessible, whereas, in the case of syphilis, any abraded surface serves as a port of entry for the germ. Given, however, the contact of the genital mucous membrane with the gonococcus, infection occurs much more readily than in syphilis, which latter re-

quires an abrasion—an *atrium*—as the essential requisite for infection.

Gonorrhea depends upon a very virulent germ—or, even laying the germ-etiology aside for the moment and accepting the broad proposition that gonorrhea affords a secretion that is extremely virulent—it only remains to show that facilities for the innocent conveyance of the disease are frequent, in order to substantiate the proposition that gonorrhea may be contracted innocently.

The "water-closet" theory of the origin of gonorrhea has received much ridicule, yet, the author believes that, if logically considered, this theory will not appear quite so absurd as it does at first sight. It is a practical impossibility for careless individuals having a profuse gonorrhreal discharge to use the public closets found in saloons and hotels, without depositing more or less of the virulent discharge. The purulent meatus is rubbed over the closet-seat so as to deposit more or less secretion, unless the patient be unusually

careful. The next person using the closet, unless extremely cautious, brings his urinary meatus in contact with the infected surface.

Is the belief, that gonorrhœa-infection may occasionally occur in this manner, illogical? We are too prone to question the patient's veracity. Ridicule hardly is a safe argument in a question that can be reasoned upon as logically as can other infections. This is important from a medico-legal standpoint. Expert testimony to the effect that no individual could, possibly, have contracted gonorrhœa in the innocent manner above described must, certainly, depart from the ordinary manner of logic. However profound his knowledge of infection in other directions, the expert so testifying must, necessarily, manifest the

densest ignorance of sound pathologic and bacteriologic principles. He certainly could not sustain himself under clever cross examination. The same argument is pertinent, although perhaps not equally so, as applied to the possible innocent infection of women, in whom a contagion through the medium of flies probably is more frequent than generally is believed.

The author is well aware that the views herein expressed are likely to be received with derision, still, as already stated, ridicule upon a question so open to logical reasoning as that under consideration hardly is worthy of respect.

The possible forensic application of the author's views has received due consideration, but, has in nowise shaken his conviction.

After Thirty Years—XI

Notes and Reflections on Life and Work

By WILLIAM RITTENHOUSE, M. D., Chicago, Ill.

[Continued from February issue, page 119]

Nonprofessional Culture

EVERY man ought to know something about everything, and everything about something. Or, to put it less epigrammatically and more clearly, every man should strive to be an expert in his chosen field; but, he also ought to have a reasonable grasp of every branch of human knowledge, sufficient to enable him to appreciate and feel an intelligent interest in the progress that science is making in revolutionizing the world. Especially does this duty rest upon the medical profession, for more than one reason. It is, in the first place, one of the three "learned professions", as medicine, law, and divinity have been called from time immemorial. In the second place, it comes very close to the people in the influence it exerts upon them, and especially upon the rising generation, to many of whom it constitutes the chief stimulating influence toward whatever culture may come into their respective lives. This is particularly true in country and village life, where the family physician still is looked upon with an affectionate

respect and veneration approaching hero-worship. The family physician who is also a cultured gentleman and a man of science has, by his influence, done more to stimulate young men to make something of themselves than is generally believed.

The great mass of mankind live far beneath their privileges. Their lives are unnecessarily bare and barren. Their enjoyment of life is far below what it might and ought to be, were they to take a scientific interest in some field of human knowledge. We are all familiar with the type of business man that takes no interest in anything outside of business and moneymaking and who prides himself upon being intensely "practical", by which he means that no knowledge is of value unless it contributes directly to his financial success in business. If he studied pure science when he attended school or college, he looks back upon that experience and speaks of it as "wasted time". He says, "I studied geometry at school, and what good has it ever done me? I could not now demonstrate a single proposition of Euclid." As if that were what he studied it for! He looks with goodnatured contempt upon his

friend that is interested in geology or in botany and regards him as a harmless "nut".

In the course of time, this man feels that he has made money enough and decides to retire from active business and to "enjoy himself for the rest of his days", as he expresses it. But, alas! he has no mental equipment to enable him to enjoy himself. Business was the only thing that interested him, and now, that that is gone, he is like a fish out of water. Perhaps he decides to travel. But, the things that make travel a delight to the cultivated mind mean little or nothing to him.

A few years ago, in returning from the Pacific Coast, I spent four days in the same car with one of these pitiful poverty-stricken rich men. This man told me that he had lived in Boston (think of it!) all his life, had accumulated all the money he wanted and had retired from business, to spend the rest of his life "having a good time". He said that he had tried every form of amusement that he could think of, but, soon grew tired of them. He had tried loafing, but that soon palled upon him. He had tried travel. California had pleased him for a time, however, after he had seen all the regulation "sights" that tourists are expected to see, he was again back to the old problem of what to do with his time. The railway journey across the continent was a terrible bore to him. He spent his time reading a cheap novel so trashy that I will not advertise it by naming it. To most of the passengers, the desert, the mountains, and the plains were so full of interesting things that we felt sorry that some of it was passed in the night. I tried to arouse this fellow's interest in the wonderful geology of the region through which we were passing, but, with very little success. The painted desert, the petrified forests, the extinct volcanoes did arouse a fleeting interest in his mind, only to culminate in this confession: "I have no doubt, doctor, that all this is very interesting to you who understand these things, because you studied them when you were younger; but, then, I never learned anything but just business, I am sorry to say. I now see how foolish I was, however, it is too late to correct my mistake—too late. I am too old to begin the study of that sort of thing." (And he was in the early fifties!) I assured him that, really, he

was at just the right age to begin and that his business-trained mind would enable him to learn rapidly any subject that he might undertake. This shriveled soul's interest was aroused sufficiently so that he made a note of a list of books on the geology of the west and expressed his intention of making another trip over the region, in order to see whether he could not learn something worth while. I assured him that, if he would look at nature with inquiring eyes, always keeping before him the thought, "How did all this come about? What does it all mean?" he never would be at a loss for a way of passing his time.

The medical profession at all times has produced some men that have interested themselves in scientific study outside of their professional work, still, their number is altogether too small. Every doctor should interest himself in some branch of science outside of medicine, not only because his own pleasure in life is vastly increased thereby, but, also, because his influence in the community will be enhanced, while the young people, who look up to him as a pattern, are stimulated in a direction most important to themselves.

In this country, we have lagged behind somewhat in this matter, mainly because we have not insisted upon a sufficiently broad foundation upon which to build a medical education. We have allowed students to enter upon the study of medicine whose general education was lamentably deficient. In Canada and most European countries, a broad and thorough college-education is required before the student is permitted to begin the study of medicine. The man who enters upon a medical course without a thorough general education is hampered, not merely by finding his college-work unnecessarily hard, but, if he ever does get through, his work as a physician is liable to be of a low grade and he is not likely ever to confer distinction upon the profession by achievements in the field of pure science.

Despite the many obstacles, gratifying signs are becoming evident that in the medical profession in this country there is an increasing number of men and women that are devoting themselves to scientific research in fields not directly connected with "shop". I can not refrain from mentioning at least two instances in which Chicago physicians have, in this manner, conferred

honor upon our profession as also upon themselves.

As For Good English

The articles on the English language now appearing in CLINICAL MEDICINE, from the pen of Dr. George F. Butler, are a credit both to the Doctor and to the magazine. They bear evidence of a degree of scholarly research that is all the more gratifying because it is so rare. The need of a better appreciation of "English undefiled" is very evident, not alone in the medical profession, but, in every field of literary production today. The language employed in our newspapers and magazines, while generally excellent in style and syntax, is, nevertheless, too often marred by a sloven grammar. It makes one long for a crusade for encouraging pure English. Thus, some two years ago, I was humiliated when a dry-goods clerk (*sic!*) pointed out to me, in the text of a circular issued by the A. M. A., this sentence: "The steamer will lay at the dock during the meeting." Facetiously remarking that that ought to make eggs cheap, he added: "This from one of the *learned* professions!" I have observed this same misuse of the transitive verb "lay" for the intransitive "lie" in at least three of our leading scientific magazines, while the expressions "none was" "prone on his back", and "everyone enjoyed themselves", and "I will go" (futurity) and "shall he go?" (futurity) are so common that it is difficult to persuade some people that they are ungrammatical.

The fault lies in the way in which grammar is being taught today in our schools and colleges. We have, indeed, fads enough in medicine, but, they do not compare with the fads prevailing in our system of education. The methods of teaching grammar that have stood the test of time for generations have, unfortunately, been abandoned. As, for instance, the desire to make things more easy for the pupil has done away with parsing; but, parsing is the best test yet devised for finding out whether a pupil understands what he reads, and for fixing in his mind the rules of grammar, without a thorough understanding of which he is like a rudderless ship when he wants to express himself in good English.

The most scholarly and scientific exposition of the psychology of the Great War, of the causes of the war itself and of the

amazing revelations aient the character of the German people brought out by it comes from the pen of a Chicago physician, Dr. William S. Sadler. In his book, "Long Heads and Round Heads: or What is the Matter with Germany?", the Doctor draws from well-established ethnological facts an explanation of the astounding barbarities that have alienated from Germany the sympathies of the civilized world.

In older nations, such as Great Britain, for instance, there are plenty of men in the medical profession whose inherited wealth frees them from the necessity of devoting all their time and effort to earning a living, and it is gratifying that so many of them have done their part in the advancement of pure science. In America, as in all comparatively new countries, the great majority of doctors are busy earning a living, and those that have accomplished things on the side have not done so because of the leisure that comes with inherited wealth, but, because of the energy that overcomes all obstacles and finds time even in the busiest life to act upon the principle that we do not live by bread alone.

The Moral of It All

This brings me to the kernel of the whole matter, the object that I had in view in planning this article, namely, that the busiest doctor can find time, if only he will, to do something more than just be a doctor. No life that ever was lived was a better proof of this than that of the man Theodore Roosevelt, who has just passed away and whose death is an international loss. Roosevelt was a physical weakling in his boyhood, but, by sheer will-power, he carried out the outdoor life and the physical exercise that made him a marvel of endurance, so that, during a public career of prodigious activity, he found time to write more books than some men find time to read. When he wrote upon a subject, he wrote from a broad and thorough knowledge, so that whatever he wrote always was worth reading. His "African Game Trails" is a hunting-story, but, is far more—it is a record of scientific observation on an astonishing number of subjects. When one considers the great variety of subjects upon which he was well informed, it seems a marvel how the man ever found time to acquire the knowledge, to say nothing of writing about it. The secret lay in the fact that he was a keen and accurate

observer, and still more in the fact that he never wasted any time, but, made use of the little fag-ends of spare time that most of us waste.

The famous "pig-skin library" which he carried with him (and read, too) on his hunting and exploring trips in Africa, South America, and elsewhere, is a selection characteristic of the man. The broad scope of the titles of these books is almost stunning to the average man. Space will not permit me to enumerate the full list of over seventy volumes; however, some idea of the wide field covered may be formed from the following: Shakespeare, Tom Sawyer, Spenser's Faerie Queen, the Bible, Alice in Wonderland, Scott's and Dickens' novels, Bret Harte, Euripides, Bunyan, Homer, Dante, Froissart, Goethe, Omar Khayyam, Longfellow; and, before he left Africa, he had sent out to him, to read on the way home, Don Quixote, Montaigne, Molière, Green's History of the English People, besides a few others. It makes one feel ashamed to think that one ever offered the excuse: "I haven't time".

The influence of such a man is tremendous. It can not be measured; but, it would be no exaggeration to say that Theodore Roosevelt has, to some extent, influenced millions of characters, while many have had their whole careers changed for the better.

The Doctor's Opportunity

Man is an imitative animal. We all are more or less following the lead of some one that we admire, while the vast majority of the human race are greatly inclined to hero-worship when the opportunity presents. We doctors do not always realize to what a degree the young people of our acquaintance look to us for guidance in the things that make for a fuller culture and a more intellectual life. If we did, we should do more to make ourselves what the community expects us to be, namely, the best-educated men in its midst.

The field of pure science is so large that it affords opportunities to suit every taste. For the man who loves outdoor life and prefers to combine physical and mental recreation, there are the natural sciences,

such as botany, geology, and the various branches of zoology. Under the latter, the study of birds is a favorite and a most interesting one. Collecting and classifying insects is another interesting branch, and this field is so large that many limit themselves to one subdivision, such as butterflies or bugs. Our boys in France took a very lively interest in "cooties", although hardly for the pure pleasure of the pursuit.

Those whose tastes are inclined to literary pursuits, and, indeed, everybody during the months when outdoor study is not practicable, can find abundant enjoyment in languages, in the various branches of literature and history, or in the science of language itself, philology. Really, the latter is a most fascinating study. I used to imagine that it must be pretty dry; but, when, many years ago, on the advice of a friend, I bought a copy of "Earle's Philology of the English Tongue", I found it as fascinating as a novel. The amount of history that words carry in themselves is astoundingly interesting. In fact, we are deeply indebted to philology, ethnology, archeology, and paleontology for our knowledge of the past of this interesting old world, far more so than to written history, which often is inaccurate, either through the ignorance or prejudices of the recorder; while the evidences set forth by the sciences I have named is not tainted in that manner.

Of all the outdoor sciences, one of the easiest and most fascinating is that branch of geology known as glacial geology: the study of the traces left by the ice-age, when the frigid climate of Greenland reached as far south as the Ohio River, and an ice sheet hundreds of feet in thickness moved slowly over all the region of our northern and northeastern states. To study this subject, no equipment is needed, while every railway journey affords the happy opportunity. Astronomy is the only other science that brings the mind face to face with forces of such stupendous magnitude and irresistible power—such sublimity and grandeur.

[To be continued.]
2920 Warren Ave.



The Composition of Feces With Reference to Diagnosis

By CHARLES WILLIAM LARRABEE, M. D., Gainesville, Georgia
Surgeon, G. & N. W. Railroad.

THE feces are derived from four sources, namely: (1) the remnants of unabsorbed food; (2) the discharge of epithelium from the mucous membrane of the intestinal tract; (3) the remnants of the digestive fluids; and (4) the bacteria. They consist of the following elements:

1. The unchanged residue of animal or vegetable tissue used as food; namely: hairs, horny and elastic tissues, most of the cellulose, woody fiber, spiral vessels of vegetable cells, and gum.

2. Portions of digestible substances, especially when these have been taken in too large amount or when they have not been sufficiently broken up by chewing, portions of muscular fibers, ham, tendon, cartilage, particles of fat, coagulated albumen, vegetable cells from potatoes and other vegetables, raw starch, et cetera. All foods yield a certain amount of residue, as, for example, white bread, 3.7; rice, 4.1; flesh, 4.7; potatoes, 9.4; cabbage, 14.9; yellow turnip, 20.7 percent.

3. The decomposed products of bile-pigments, which do not now yield the Gmelin reaction (nitric-acid test), as well as the altered bile-acids. The reaction, however, may be obtained in pathological stools, especially in those of a given color: unaltered bilirubin, biliverdin, glycocholic and taurocholic acids occur in meconium.

4. Unchanged mucin and nuclein (the latter occasionally after a diet of bread), together with partly disintegrated cylindrical epithelium from the intestinal canal and occasionally drops of oil. Cholesterin is very rare—the less, the mucus is mixed with the feces and the lower, the part of the intestine from which it is derived.

5. After a milk-diet and also after a fatty diet, crystalline needles of calcium combined with fatty acids and chalk, soaps constantly occur, even in the sucklings, and even unchanged masses of casein and fat occur during a milk-cure.

6. Among the inorganic residues, soluble salts rarely occur in the feces, because

they diffuse readily, among these being common salt and other alkali chlorides, the compounds of phosphoric acid and some of those of sulphuric acid. The insoluble compounds—of which ammonia-comagnesic, or triple, phosphate, neutral calcic phosphate, yellow-colored lime salts, calcium carbonate and magnesium phosphate are the chief forms. Some of these insoluble substances are derived from the food, such as lime from bones, and, in part, they are excreted after the food has been digested.

7. Products of bacterial action. These comprise the entire series of fatty acids, from acetic acid to palmitic acid, further, lactic acid, succinic acid, glutaric acid, leucin, tyrosin, hydroparacimic acid, para-oxyphenylacetic acid, phenylpropionic acid, phenylacetic acid, phenol, paracusol, indol, skatol, skatol-carbonic acid, ammonium carbonate, ammonium sulphide, and conjugate glucuronates.

8. Water.

9. Gases, which are, in part, referable to the various fermentative and putrefactive processes that take place in the intestinal canal, such as carbon dioxide, methane, hydrogen, hydrogen sulphide, methyl-mercaptan, phosphin. The nitrogen, on the other hand, which also is constantly met with, is, probably, derived from the blood and has, in part, been swallowed.

Normal Feces.

For comparison, it is necessary to have something as a standard, and, as such, a fecal discharge from a condition approaching starvation might be taken. In such feces, there are no food residues, but, the other things are abundantly represented. Many analyses of feces have been made from those of persons who, for a period of several days, had consumed no food, and these give some idea of the character of the discharge that might be expected when the minimum of food is consumed, and no more. It has been calculated in this way that about 10 to 12 Grams

daily is the average normal discharge, from a man of 70 kilograms in weight, derived from sources other than the remains of food. Numerous attempts have been made to find the average composition of feces from a diet containing just enough protein, fat, and carbohydrate to keep the body in normal condition.

While the examination of the stool may be performed with a moderate degree of certainty on any form of diet, yet, owing to the variations that sometime occur, it is much more desirable that patients be placed upon a fixed diet for forty-eight hours before a specimen is taken. The best diet that has been adopted is that of Schmidt, which is as follows:

Breakfast: Half a liter of milk, and 50 Grams of crackers.

Lunch, mid-forenoon: Half a liter of oatmeal-gruel, consisting of 40 Grams of oatmeal, 10 Grams of butter, 200 Grams of milk, 300 Grams of water, and 1 egg, which is to be strained.

Dinner: 125 Grams of Hamburg steak, lightly cooked, 20 Grams of butter, 250 Grams of mashed potatoes, containing 10 Grams of butter and 100 Grams of milk.

Lunch, mid-afternoon: Of the same character as the breakfast.

Supper: Of the same nature as the mid-forenoon lunch.

Consistency and Form of the Feces

The consistency and the form of the feces are, principally, dependent upon the amount of water present, and vary for different animals. Generally speaking, they are softer in the herbivorous animals than in the carnivora. In man, they usually occur in the characteristic plastic cylindrical form, but, may, at times, be mushy or round and hard, even in health, under a mixed diet like that mentioned. They should be cylindrical in form and of moderate caliber. A semifluid stool may be normal if vegetables largely predominate, or, in vegetarians. Very liquid stools, unless produced by laxatives, are abnormal, as are very hard stools, made up of the so-called rabbit-form (scybalar), which indicates long delay of the feces in the colon and excessive absorption of it, including water. The lead-pencil or pellet form is not pathognomonic of intestinal stricture, but, rather, indicates a spastic condition of the colon; while a low-lying stricture of

the latter may be accompanied by a normal stool.

Amount, Odor, and Color

The amount of fecal material that is eliminated within the twenty-four hours depends primarily upon the amount and the character of the food that has been ingested. In man, it normally varies between 100 and 200 Grams, but may diminish to 60 Grams or rise to 250 Grams, even in health, according to the preponderance of animal food or vegetable material that has entered into the diet.

The disagreeable odor of the feces largely results from indol and skatol, but, may be made worse by the presence of hydrogen sulphide, methane, and methylmercaptan.

The color varies with the character of the food ingested and ordinarily is but little influenced by the decomposition-products of biliary pigments. In carnivorous animals, the feces are almost black, owing to the presence of hematin and iron sulphide. In adult man, the color normally varies from light- to dark-brown. In infants, in which the bile-pigments appear as such, the feces are of a bright-yellow or greenish-yellow color. At times and apparently under normal conditions, there also are stools passed that are grayish-white in color and closely resemble the so-called alcoholic stools as observed in cases of biliary obstruction.

The stool may assume the color of blood, either unchanged or modified, as a result of its content of cacao-fragments or those of raspberries and blueberries, as well as iron or bismuth, simulating the "tarry" stools produced by hematin; and a differentiation can be made only by chemical means, when blood actually is present. The color of the stool depends upon the time the blood has remained in the intestinal tract; for instance, if the blood comes from the small intestine, the stool is brown to black, if from the lower colon or from hemorrhoids, it is a bright-red. If bile is absent from the intestine or if the fat is largely increased from other causes, the feces assume a clay color, although, if the fat be removed by ether, they often assume their normal color.

Macroscopic and Microscopic Examination

On macroscopic examination of the feces, we frequently find undigested particles of

food, such as skins of berries, large pieces of connective tissue, woody vegetable fiber, undigested pieces of apples, pears, potatoes, grains of corn, flakes of casein, and so on.

On microscopic examination, we usually find undigested bits of muscle-fiber, connective tissue of the white fibrous variety, the framework of vegetable matter, often starch still enclosed in cells, with granules, flakes of casein, globules of fat, fatty-acid needles, crystals of calcium oxalate, neutral calcium phosphate, ammoniomagnesium phosphate, calcium lactate (these are seen especially in children on a milk-diet), and, more rarely, of calcium carbonate, calcium sulphate, and cholesterin. We further meet with more or less disintegrated epithelial cells, a few leukocytes, bits of mucus, and, above all, the innumerable microorganisms. Often it appears as though the stools consisted of these exclusively; Sucksdorff estimated in his own person that, on an average 53,124,000,000 microbes were eliminated in the twenty-four hours.

General Chemical Composition

In adult man, the reaction of the stools mostly is alkaline, sometimes neutral, and but rarely acid. Acid stools, on the other hand, are the rule in infants.

A general idea of the average composition of the human feces may be gained from the following analyses, which are taken from Gauties, and have reference to 1000 parts, by weight, of the fresh material:

	Man	Suckling
Water	744.00	871.3 parts
Solids	267.00	148.7 "
Total organic matter	208.75	137.1 "
Total Mineral matter, (not including earthy phosphates)	10.95	13.6 "
Alimentary residue	84.00	"
The organic matter yielded:		
Aqueous extract....	53.40	53.5 "
Alcoholic extract.. tract	41.65	8.2 "
Ethereal extract....	30.70	17.6 "

Diagnostic Value of Fecal Analysis

The diagnostic value of clinical analyses of the feces is, at present, not generally

appreciated, doubtless partly, because methods convenient for the general practitioner have not been described as yet: Some of the points are:—Mucin—When this is found attached, in shreds, to the outside of the stool, it indicates presence of colitis, even when the stools are formed and there is absence of diarrhea. When minute particles are well mixed with the stool, colored with hydrobilirubin or bilirubin and studded with nuclei of epithelial cells, it indicates an inflammatory disturbance of the upper intestinal tract or small intestine. In general, the finer the particle, the farther the seat of the disease is from the anus; the more cells found embedded in these fragments, the greater is the intensity of the inflammation.

Modified and Unmodified Bilirubin

With reference to bilirubin these conditions may be present: First, after the bilirubin leaves the ileocecal valve, on account of the large number of bacteria, it may be converted wholly to stercobilin. This is a normal condition. Second, when bilirubin persist and is found attached to muscle-fibers, calcium soaps, et cetera, it indicates an increased motility of the small intestine, which does not allow reduction to take place; but, this may be brought about by the use of laxatives. Third, when meat-fibers show no coloring on the addition of mercuric chloride and are unacted upon by reagents, have only a very faint lemon-color or are colorless, it usually indicates a partial or complete closure of the biliary duct, and it is usually associated with a large amount of fat.

Fat.—The presence of a large amount of fat or soap crystals points either to insufficiency of bile secretion or to obstruction of the common duct, when the hydrobilirubin is likewise absent, or to a chronic catarrh of the small intestine, which also is accompanied by numerous muscle-fibers and mucin fragments. The presence of a larger amount of neutral fat, with which also may be associated muscle-fibers and free starch granules, points to insufficiency of the pancreatic juice, to which may be added either a normal stercobilin content or a deficiency, as disturbance of the bile flow is likely to be associated with that of the pancreatic juice.

Meat Fragments.—When a large number of connective-tissue fragments are found

in the feces, it points to a disturbance of gastric digestion, because the intestine has little or no power to digest this portion of the meat, leaving that to the stomach. This abnormality, is, as a rule, a hypochlorhydria or achylia. This disturbance may be so great that practically all connective tissue taken may be found unchanged. This condition may also be owing to increased motility of the stomach, and, even when hypochlorhydria exists, to incomplete digestion because of an excess of the very medium in which it acts. When a large amount of meat-fibers are found, it points to defective intestinal digestion, confined, usually, to the duodenum. This disturbance may be defective pancreatic juice, when fibers usually are associated with fat and starch, or to increased peristalsis, by which time is not given to complete digestion, or to a delayed absorption. When both muscle-fibers and connective tissues are found, it points to a combined disturbance of the stomach and intestine, such as present in acute gastroenteritis.

Carbohydrate Fragments.—These are much rarer and point to disturbance of digestion in the small intestine, usually dependent upon an insufficient secretion of pancreatic juice.

Fermentation and Putrefaction.—The former means an excess of carbohydrate in the stool, which usually has a light, foamy appearance, and an acid reaction. When putrefaction is present, it means more than the mere presence of food remnants, which do not produce a pronounced effect; in fact it usually signifies a severe condition, such as an ulcer, pus breaking into the intestine, malignant disease, and the like.

Blood and Pus.—The former, when red and fresh, points to a disturbance in the lower colon or rectum (hemorrhoids), when

tarry, to the small intestine or to hemorrhage in the stomach. Pus, when its form and nuclei are apparent, also must come from the lower colon and rectum for, if from a higher point, it usually is digested before being passed.

Austin says, regarding the pathological conditions, that little can be determined, for he has had repeated opportunities to examine the stools of those suffering from malignant disease just above the rectum, (as determined by operation), tuberculous diseases and severe dysentery. No difference has ever been observed in the stools in these three conditions, all of which are accompanied by some discharge in which no food-remnants could be found.

Summary

1. Skatology is a subject that has been greatly neglected, for various reasons, especially because of lack of knowledge and of needed apparatus for bedside examination.
2. The subject has been more closely studied at the experimental agriculture stations, with regard to animals than to man.
3. There is a good field open for someone, to devise a small pocket-set, and reagents that can easily be understood and used at the bedside.
4. In talking with numerous physicians, they frankly admitted to me that it is a subject with which they are sadly unfamiliar and expressed the wish that there were available more definite literature upon the subject, as about all they can do at present, with the knowledge and apparatus at hand, is, to do as physicians of old did, namely, to look at the stools, and if light-colored, to give a dose of calomel, if dark-colored, a dose of podophyllin.



How Uncle Sam Cares for the American Soldier

Special Article

EDITORIAL COMMENT.—This special article was prepared from a large amount of information placed at our disposal, several months ago, by the office of the Quartermaster General of the Army. For this assistance, we desire to express our grateful appreciation.

NOT since the army has been in France has a single man had to wait a minute for a meal that was due." In these words Secretary of War Newton D. Baker, some months ago, summed up the accomplishments of the Quartermaster Corps in feeding the American Expeditionary Forces, he quoting from a cablegram received the same day from General Pershing.

In these days when wars are fought by nations rather than by armies, the problem of feeding the fighting man and still maintaining sufficient food supplies to support civilian populations is one of the greatest magnitude. It is true today, as in Napoleon's times, that "an army fights on its stomach." Brigadier General Robert E. Wood, the Acting Quartermaster General, stated this truth vividly when he said on the same occasion: "The army may lack aircraft and it may lack guns, but, when Private John Smith does not have enough food, blankets, and clothing or if he is not paid promptly, every relative of the aforesaid private immediately comes to the conclusion that the war is not being properly directed."

To feed the soldiers, is no cold-blooded business. It requires sympathy with the soldier and an insight into his past habits.

The food of the Army is secured through the Subsistence Division of the Quartermaster Corps, and it is the concern of this Division to put itself in the place of the soldier—to think and feel with him at his mess.

Careful study of the table of the average American family has given birth to the Army ration. No experiments are made on the American soldier. Every food must have been approved by the civilian population before being used in the Army. It is felt that the soldier is a normal human being and should not be a victim of theorists. A soldier prefers a stomach full of substantial food to a stomach full

of calories and vitamines. However, food-experts are not forgotten, and care is taken to see to it that the meals are properly balanced. The average soldier has gained 12 pounds in weight since entering the service. This tells whether his food is nutritional or not.

There is nothing that brings quicker complaints from the soldier than dissatisfaction with his food supply. That the food not only is ample as to quantity, but, of good quality and well prepared, was attested to by Secretary Baker, who said: "From no camp, have I had a criticism that the food was insufficient, that it was unwholesome in its character, that it was not well cooked or did not arrive on time."

No restrictions are placed upon our soldiers' appetites, but, the highest care is exerted to prevent the soldier from taking more on his plate than he will eat; in other words, much of the food that was formerly lost through carelessness is now saved. The Reclamation Officer in every camp and every cantonment is responsible for the separating and the classifying of kitchen-waste that is produced in the preparation and serving of every meal at the mess. The object of this careful separation and classification of this kitchen waste is, to check up on wastage—to prevent wastage. The division of Conservation and Reclamation of the Quartermaster Corps, cooperating with the Food Division of the Medical Department, interests itself especially in the storage of food and in the reduction of waste.

The Ration of the Soldier

The ration of the American soldier consists of 27 articles that must be ready for him regularly every day. These 27 articles that go to make up the daily ration all together, weigh about 4½ pounds and cost about 45 cents.

The soldier gets liberal amounts of the most nutritious food. At present the Army is using around 1,250,000 pounds of

butter and 700,000 pounds of oleomargarine every month. In the United States, about five times more butter than oleomargarine is being used during this season.

During the summer, the quantity of butter available is very large, and, with prices accordingly low, it is the favorite for use. In winter, however, the high price of butter reduces the quantity used, and increases the quantity of oleomargarine, until the amount of each commodity consumed is about equal.

In France, where it is possible to procure butter from the local markets during the summer months, the quantities of butter and of oleomargarine used during the year are about equal. The Subsistence Division of the Quartermaster Corps is exceedingly strict in its requirements for butter supplied to the Army and exercises great care in inspection so that the highest quality only is supplied, both in this country and abroad.

The Subsistence Division of the Quartermaster Corps recently completed purchases of potatoes and onions for August requirements at the various camps and cantonments. The total amount of both commodities purchased equaled 27,527,500 pounds, which is, by far, the largest amount handled by the Potato and Onion Section since the central purchasing system was inaugurated.

During the first seven months of the year passed, the Army required 1,612,313 cases of evaporated milk. This number of cases is equivalent to 77,391,024 quarts of fresh milk, and it took approximately fifty milk-concerns to furnish this amount. Evaporated milk is an important element entering into the soldier's ration. It is even more important in France than in this country, for, there the rate of actual consumption by the American troops is four times the allowance specified in the Army ration. The Subsistence Division of the Quartermaster Corps exercises great care to see to it that the milk is in sterile condition and that it contains the required percentages of fats and solids when it reaches the soldiers. Every car of milk for the Army is inspected and chemical analysis made before being issued for consumption.

The American Army in France is getting good soft bread, made from pure wheat flour. Our troops in the United States have been getting the prescribed amount of substitutes in their bread, and it has proved

satisfactory. Here, bakers are definitely located and can easily work out mixtures that will produce good bread. The daily ration for soldiers of the American Expeditionary Forces is 18 ounces of wheat flour for soft bread. This has proved to be more than enough, and a reduction to 16 ounces per day is now under consideration. The Army supply of flour at this time is abundant at every place along the line, from the mills to the battle lines in France. Every requirement for flour, both for domestic and overseas consumption, is met.

Sugar and Sweets

Since the Government has been handling the purchase of sugar, through the United States Food Administration (Sept. 1, 1917), approximately 200,000,000 pounds of it has been used by the Army. This amount is exclusive of the depots and camps on our West Coast, where they have been using raw sugar from Manila, having it refined locally. A conservative statement of the amount of sugar procured on the Pacific Coast is about 25,000,000 pounds, making the total purchase for the Army 225,000,000 pounds. It is found that about 237 pounds of sugar is consumed by 1,000 men at their meals in one day.

Approximately 75,000,000 cans of tomatoes were purchased by the Quartermaster Corps from the 1917 pack.

The prune occupies a most important place on the Army bill of fare. This place has been won by merit, for, it has been proven that the prune has value as food, as fruit, as a tonic, and as a confection. It has the high approval of the food-experts in the Subsistence Division of the Quartermaster Corps and it has been recommended by the Surgeon General of the Army.

Out of the 1917 crop, the Army used 20,000,000 pounds of prunes. Based on size "55", this amounted to 1,100,000,000 prunes. In order that the Army may have its full prune supply, the requirements for a year are figured out in advance prior to the time the new crop is ready for harvest. This avoids delay and assures getting the size of prunes most suitable for its use.

Special attention has been paid to meeting the express wants of the soldiers. When they mention a desire for any particular article, pains are taken to supply them with it in adequate quantities and of the best quality.

Lemon-drops (the candy) are so popular in the Army that considerable difficulty has

been experienced by the Subsistence Division of the Quartermaster Corps in obtaining the quantity and quality desired. About 200,000 pounds of lemon-drops is used each month at the present time, constituting about 15 percent of the amount of candy furnished to the Army. Samples were secured from practically all the candymakers in the United States and the lemon-drop that was thought best for the men was adopted as the standard. The formula was then secured and distributed among a number of candy-manufacturers, with the result that at present the Army is being very well supplied with the confection. The lemon-drops now being supplied to the Army are made of pure granulated sugar and are flavored with an emulsion made from the rind of the lemon. It is found that an extra sour lemon-drop is the favorite with the soldiers. The product made from the formula used has the thirst-quenching quality of lemonade.

Care is being taken to see to it that manufacturers do not use undeveloped cacao-beans in the manufacture of chocolate and candy for the Army. It is found that, among the beans used in making these products, there are many undeveloped beans. This is caused by the dense shade of the cacao-tree. The taste of chocolate made from the undeveloped bean bears the same relation to that from the developed bean as does the crab-apple to the winesap apple. Candy, when made from the poorer product while pure, is very different in taste, being somewhat bitter and unsatisfactory. Steps are being taken to see to it that this substitution is not made in Army products.

The Cup of Coffee

As a part of the plan of the Quartermaster Corps to keep American troops overseas well fed, the authorization for the establishment of coffee-roasting plants with the American Expeditionary Forces has been approved. Through the installation of these coffee-roasting and grinding plants in France, it will be possible to supply our soldiers with coffee that is issued within twenty-four hours after roasting. It has been estimated by coffee-experts that coffee deteriorates in quality about 30 percent when issued ten days after being roasted. The policy of the Subsistence Division of the Quartermaster Corps will be, to have coffee issued fresh every day. The American soldier likes his coffee strong, and the best Santos coffee is being bought and the

best coffee-roasting process used, so as to give him what he wants.

The Subsistence Division has been somewhat handicapped in its work by the strong desire of its officers for service in France. Fighting the kaiser in the kitchen—in Washington—is without the glamor or romance of life at the front. This feeling has been a benefit, however, in that it has effected a keen desire for the comfort of the men in France, because the men who have secured the food for the Army see, in the men in the trenches, themselves, about three months hence. The personnel of the Subsistence Division has changed rapidly, but, not with such rapidity as to lose the pervading spirit that "subsistence must not fail." The men in the United States are looked after, and it is seen to that they do not lack in anything that is essential for their sustenance.

The Reserve Ration

Every effort is made for the men in the front-line trenches to secure hot food. There are times, however, when food can not be carried forward. This often happens under heavy barrage-fire or after gas attacks. To meet this situation, a reserve ration for the trenches has been prepared. This ration is prepared in a gas-proof camouflaged sealed container, and is sufficient food for twenty-five men for a day.

It consists of hard bread, corn-beef, corn-beef hash, roast beef, salmon, sardines, soluble coffee, sugar, salt, besides the necessary can-openers. The package is hermetically sealed, each container being subjected to water and air pressure before being accepted. This rigid precaution is taken so as to safeguard the food in it against poisoning during gas attacks.

The cream of food products is put into this ration. It is prepared in the most tempting manner, for, it is only used when there is blood and fire in the air. The Subsistence Division has seen to it that this food is especially good. To feed an Army well, requires sympathy and a "put yourself in his place" spirit. The ration contains prepared coffee that dissolves instantly in cold as well as in hot water. Hot water is not always procurable in the trenches, as having a fire means, to invite shells from the enemy.

Prices Paid for Army Supplies

The Subsistence Division has felt its duty, not only to the men in uniform, but,

also to the civilian population. It has solved the problems of making purchases in vast quantities without seriously affecting the markets of the country. It is true that there have been advances in price, because of the great demands of feeding an Army of two million five hundred thousand men. This, of course, has been inevitable.

The prices made by the Subsistence Division of the Quartermaster Corps for the most important articles of food supplies to the camps and cantonments in the month of July were as follows:

The basic price for Army beef in July was \$23.05 per hundred pounds at Chicago. The Army cut of beef is worth \$1.00 per hundredweight more than the standard cut. Hams were purchased at 31 cents per pound and bacon at 43½ cents per pound, both delivered at camps.

July purchases of butter were made on an average of 42½ cents per pound, f. o. b. Chicago, and 43½ cents delivered at camps. July prices for oleomargarine were 26¼ cents per pound, f. o. b. Chicago, and on an average of 27½ cents per pound delivered at camps. The price for lard was 26½ cents delivered at camps and for lard substitutes 21¾ cents per pound delivered in camps.

Flour was purchased at \$11.10 per barrel of 196 pounds, packed in 98-pound sacks, f. o. b. Chicago. The average price for sugar was \$7.30 per hundred pounds, f. o. b. seaboard refineries. Potatoes were purchased at an average cost of \$2.84 per hundred pounds, delivered at camps, and the average price paid for onions in July was \$2.97 per hundred pounds, delivered at camps.

The drain upon the commercial supply of food is greater now¹ than ever before, as very many of the 2,500,000 men in the Army prior to entering the service got their food from sources from which at present no supplies reach the market. This is especially true of the great number of farmers and small-town citizens who are now in the Army. It is estimated that the users of fresh beef have doubled with the mobilization of our troops.

At the beginning of the war, it was found that independent buying for the Army, Navy, and Allied Provision Export Committee was having the effect of raising

prices in the market, as these agencies were bidding against one another. To control the commodities most affected, twenty of these articles covering the principal food supplies, which were believed to be those that were in such great demand that the supply was not sufficient to meet all requirements, were placed under the control of the United States Food Administration.

Army Purchases and the Market

Giving each packer, manufacturer, miller, and refiner the opportunity of selling to the Government a proportion of his product at a fair price and in that way contributing his bit toward the maintenance of the boys "over there" is, briefly, the basic idea underlying the method in which the Subsistence Division handles those products which constitute 40 percent of the total quantity of food supplied to the Army. This purchasing is done in conjunction with the United States Food Administration.

So enormous have grown the demands of the Army that the allotment-plan—each packer participating—was determined upon as the most feasible plan by which the Army could be supplied with these foods—canned vegetables and fruits, dried fruits, sugar, flour, milk, salmon, rice, dried and baked beans.

When the United States entered the war, it was faced by tremendous requirements for its allies, whereas the available supply on hand showed barely enough to take care of our own requirements. Conservation of wheat and flour was made possible by a voluntary agreement of the millers of this country with the Food Administration, under which every mill in the United States furnished its proportionate share to a committee of their own, which, in turn, divides the flour with the Army, the Navy, and our allies. The savings thus effected was equivalent to 130 million bushels of wheat; and this amount was actually exported to Europe over and above the available exportable surplus estimated in the fall of 1917.

Since January, 1918, more than 500 million pounds of flour has been furnished the Government, and, to the knowledge of the officials of the Subsistence Division, in spite of shifting of troops, railroad congestion, et cetera, there has never been a meal where the soldier has been without bread, and plenty of it. But, "plenty" does not

¹This was written last summer.—Ed.

mean waste. Statistics from camps show that the actual amount of substitute used by the men in the service is greater than that which the food Administration asked of the civilian trade.

Some Items of Food

Next to bread and beef, probably the chief article of diet of the American soldier is milk, and the boy in the camp or at the front is getting his a little richer and of a more uniform quality than he ever did when he wore a white collar and tie. Almost 100 million cans of milk have been purchased for him during the first six months of 1918. Each canner of milk in this country furnishes his proportionate share at a price based on the market for each month.

Prunes, dried apples, and dried peaches form important parts of the Army diet. In fact, it is estimated that, for the next year, approximately 80 million pounds of these will be purchased, the larger proportion coming from California. Evaporated fruits not only are relished by the men, but, have a high food-value, as well. California also supplies more than 70 million cans of peaches, apricots, cherries, and pears, to which Hawaii adds approximately 10 million cans of pineapple. All of which shows that the troops are getting their luxuries as well as do the civilians.

You wonder why you are allowed only 2 pounds of sugar per month. More than 300 carloads, each containing 60,000 pounds—2 trainloads—were called for by General Pershing in June and half of July, alone. And this amount does not take into consideration the quantity supplied to the boys at the 32 camps and cantonments in this country, besides half a thousand more Army posts, forts, aviation-fields, et cetera.

Prices on all of the 23 different items allotted through the Subsistence Division are based upon cost findings of the Federal Trade Commission, and are determined after recommendation by the Food Purchase Board; this consisting of a member each of the Army, Navy, and Marine Corps, the Federal Trade Commission, and the United States Food Administration. In this way, each packer secures a fair return on his investment.

Purchasing is Systematized

Whereas, at the beginning of 1918, there

was practically no central organization in Washington to direct the procurement of these 23 items of supplies, there now has been built up a complete system, whereby requirements for domestic and overseas use for twelve months ahead are anticipated, reserves provided, and adequate stocks kept at all depots and camps.

The major portion of the Army ration, however, is not bought through the Food Administration, but, through a zone-system of purchase. It was found, in purchasing the tremendous needs of the troops, that various organizations within the Army were unconsciously bidding one against the other. To eliminate this, the zone-system of purchases was introduced. Under this plan, the United States is divided into 13 zones, each having a purchasing officer. Purchases are limited to their respective zones. When one zone would receive bids from another, offers must be secured through the Quartermaster Purchasing Depot in charge in that zone. It can not be secured direct.

The system has had a steady effect upon the food markets. The Army ration (three meals for one man per day) at present is costing about 43 cents throughout the United States. This cost does not include any profits upon the subsistence stores and freight, heat or light, help, fuel or overhead expense. 43 cents represents the actual cost of the food. When it is considered that the Army buys in enormous quantities and secures the lowest rates, this cost can be considered very liberal and assures the best food procurable.

Schools for Bakers and Cooks

Food must be well prepared, however, if it is to be appetizing. Toward this end, 37 schools for bakers and cooks are being operated, where men are taught how to cook and bake. To make even more sure of the proper care and attention, it has been recommended that a commissioned officer be compelled to inspect each meal served enlisted men. It is the universal practice throughout the Army for the officers to make frequent inspection of messes in their command. It is found that, where the meals are inspected three times daily, much better satisfaction is secured.

[To be continued]



What Others are Doing

DICHLORAMINE-T IN TONSILLAR INFECTIONS

In an abstract of a paper by Dr. D. Bryson Delavan, discussing the value of dichloramine-T—chloroescane solution in the treatment of infections of the upper air-passages, which was published in the *New York Medical Journal* for January 25, we find a very interesting discussion of the advantages of using dichloramine-T for sterilizing the vault of the pharynx and the tonsils. Doctor Delavan says that dichloramine-T may be used to advantage in these regions in three different conditions: (1) To prevent the extension of newly acquired infection; (2) to overcome the acute results of infections; and (3) to exterminate the bacilli persisting in carriers. He continues:

"The success of the method must depend upon the thoroughness of the application of the disinfectant. Brushing the surface of the tonsil or spraying the lower section of the nasal cavity could not, possibly, be effective. A spray-atomizer must be used that would carry the spray in all directions, upward, downward, and sidewise. The crypts of the tonsil must be disinfected down to their lowest depths, and the superior half of the nasal cavities must be thoroughly reached.

"To effect this, the following principle must be recognized and carried out: The parts must first be cleansed and then exposed to the fullest extent by the application of adrenalin or some similar astrigent, and, finally, the dichloramine-T oil sprayed into them, until every crypt and recess has been completely reached. This thoroughness was absolutely necessary, in order to secure the removal of the most deeply seated germs. Used in the strength of 2 percent or less, the solution with chloroescane was not irritating, although stronger solutions possibly might be. Suitable atomizers were necessary.

"The success of this method had thus far been gratifying. Where this method

failed, in the presence of hypertrophied tonsils or adenoids, the removal of the latter might be necessary to effect a final cure. It was desired to furnish a method so simple in itself as to be readily carried out by the average practitioner, with the aid of apparatus inexpensive, durable, clean, compact of form, light of weight, and, therefore, available for use under all circumstances of medical practice, whether civil or military."

THE HELIOTROPE-CYANOSIS OF INFLUENZA

In a paper on influenzal septicemia, published in the January 4 number of *The Lancet*, considerable stress is laid on the characteristic bluish or heliotrope color which characterizes the fatal cyanosis of influenza, or, as the authors call it, "influenzal septicemia." Their observations are epitomized in the following two paragraphs:

"Of all the features of the 'pneumonic' cases, we would lay most stress upon the color of the patient. He may not have much color at all, he may be flushed, he may be sunburnt or he may be plethoric; but, whatever the degree of his facial color, we have always been thankful when this color has remained red. It may be a sal-low-face, with redness of the lips and ears, only, or the patient may be of a rubicund type, with general redness of his whole face, or he may be flushed with the unnatural redness of fever; but, so long as his lip and ear color, whatever its degree, is red, there is ample room for hope of recovery, no matter what the lung signs, the temperature, the pulse rate or the respiration rate.

"When, on the other hand, in order to reproduce the color of the patient's facies, especially of the lips and ears, one would need to mix some heliotrope or lavender or navy-blue with red paint so as to produce the right tint, the prospect is grave, indeed, even if, at the moment, the

patient seems comfortable, has no signs of consolidation in either lung, is sleeping fairly well, taking nourishment, has no more than an ordinary degree of pyrexia, a good pulse rate not unduly fast, and a respiration rate that may not strike one as being unusual in the circumstances."

TREATMENT OF PNEUMONIA

In an article on the diagnosis and treatment of pneumonia and empyema, at the United States Naval Hospital, Newport, R. I., F. A. Asserson, U. S. N., and W. L. Rathbun, U. S. N. R., say (*U. S. Naval Med. Bull.*, Jan '19,) that, in the cases under their care, the medicinal treatment was purely symptomatic. Digitalis and its alkaloids were used for a flagging heart and morphine or codeine for pain, severe cough or restlessness. Tympanitis, always a bad symptom, was controlled by milk-and-molasses enemata (1 cup of milk and 1 cup of molasses); by turpentine stupes and by the administration of compound jalap powder in the severe cases.

Sponging for high temperature was found useful. Careful nursing and judicious feeding are of the utmost importance and the patient should be given the maximum amount of nourishment that can be assimilated. The drain on the patient's reserve is excessive and a high-calory diet, composed of easily assimilable nourishment is of vital importance. The well recognized stimulating properties of food are also an additional indication for its administration in maximum amounts. Except in a very few instances, the patients were able to take very satisfactory quantities of food, if proper attention was paid to the bowels. The pain of diaphragmatic pleurisy was controlled by a tight abdominal binder.

THYROID EXTRACT IN COMMON FEMALE AILMENTS

A very interesting article upon The Treatment of some common female ailments is contributed by F. J. McCann to the December 28, 1918 number of *The British Medical Journal*. Of particular interest are his recommendations regarding the use of thyroid glandular substance. For instance, he says: "The obese female with scanty and irregular menstruation accompanied by headaches, depression, and

pelvic pain, can be successfully treated by thyroid extract. To obtain success, the thyroid extract must be administered in small doses for a lengthy period. Not more than 1 grain should be given daily, and this dose is best administered at bedtime. Indeed, it would appear that smaller doses are more efficient, and I now frequently prescribe 1-2 or 1-4-grain doses. The dose should be continued without intermission unless there is evidence of intolerance, when a still smaller amount, of 1-10 grain, may be given or the remedy discontinued for two or three weeks. Ovarian extract, grs. 5, administered thrice daily, may be added.

"When the amenorrhea is associated with anemia or chlorosis, the addition of thyroid to the usual treatment with iron and arsenic is productive of quicker and better results."

Thyroid substance was used, also with similarly good results, in the treatment of disorders of the climacteric period; in fact, Doctor McCann says he has only found two remedies of value, and these are ichthyol and thyroid. He declares that there is probably no remedy that has such power in controlling the vasoconstrictor effects following the cessation of menstruation as thyroid extract. He has also tried ovarian extract and corpus luteum, but, with varying degrees of success. While these are of value in some cases, he is inclined to pin his faith on thyroid alone.

CAMPHOR IN INFLUENZA AND BRONCHOPNEUMONIA

During the recent outbreak of influenza in England, P. L. Giuseppi states, in *The British Medical Journal* of December 28, 1918, that he treated 250 cases with camphor, with a mortality of one—a man who died after three days' illness from bronchopneumonia.

The incidence of bronchopneumonia in the 250 cases was 26, or 10 percent; in another series of 200 cases during the same outbreak, and not treated with camphor, the incidence was 8 percent. The outbreak was very severe, and the cases treated ranged in severity from very acute to mild cases. The temperatures varied from 105.5° to 100° F.

The treatment adopted was the administration of pills containing four grains of

camphor made up with soap, in mild cases three times daily and in the very acute cases every three hours. The treatment was continued until the temperature dropped and the signs of bronchitis or bronchopneumonia cleared up.

Camphor is also a favorite remedy in the United States for the treatment of pneumonia, but, here, the favorite method of employing it is subcutaneously. Thus injected, the physician is sure of getting the full effect of the drug. It may be given in relatively small doses (1 1/3 to 3 grains) for its stimulant action; or it may be given in the full 36-grain dose of Seibert, once in 12 or 24 hours. Camphor is readily soluble in oil, and is supplied in this form in ampules ready for administration.

In many respects, camphor is the best stimulant for use in influenzal pneumonia. It has the advantage of being sedative and, at the same time, supports heart action and relieves the tendency to insomnia and nervous excitement.

A NATIONAL LABORATORY FOR THE STUDY OF NUTRITION

"A resolution of the Inter-Allied Scientific Food Commission, which does not appear to have attracted as much notice as it deserves, dealt with the need of establishing national laboratories for the study of human nutrition. The commission pointed out that, as at least one quarter of the whole income of a nation was devoted to the purchase of food by its individual citizens, it was a matter of the highest importance for the welfare and prosperity of a country that the methods of utilizing its food resources in the best way should be explored and definitely established on the basis of scientific data. The commission therefore adopted a resolution urging the allied governments to establish national laboratories to be devoted to the task."

A clipping from *Science* containing the foregoing paragraph was sent us by our friend and contributor Doctor Cuzner, of Gilmore, Florida, with the request that we publish it with suitable editorial comment. However, is any comment called for? Of the need of laboratories for the study of human nutrition, there can be no doubt. True, such studies are being carried out in various physiological laboratories; yet,

their results never have been popularized sufficiently to be of actual advantage to the consumers of foods, namely, Mr. and Mrs. Common People and their children. Usually, discoveries and statenients concerning problems of nutrition are seized upon by interested manufacturers of 'health foods,' breakfast foods and similar articles, who, though, are prone to "edit" the material so as to favor the sale of their own merchandise. By all means, let us have laboratories as suggested, and, let the results of their investigations be published in such a manner as to be of benefit to the masses.

SCOPOLAMINE-MORPHINE AMNESIA IN LABOR

In the *American Journal of Obstetrics* (Oct. 1918) W. R. Livingston reports on 275 cases of delivery under scopolamine-pantopon amnesia in which there was no maternal mortality nor any immediate mortality in the newborn. Among the advantages of the method to the mother are the following: Heart lesions are saved the danger of muscular effort and exhaustion; borderline pelvic contractions are allowed the full test of labor with a minimum of exhaustion; the mother knows throughout pregnancy that labor will be practically free from suffering; the cervix dilates with less trauma, and, in first labors, more rapidly; use of high forceps is relatively infrequent; afterpains are absent or of lessened severity; breast engorgement is less; there is absence of shock *post partum*, together with absence of muscular soreness and exhaustion; convalescence is more rapid. In regard to the child, the advantages are that more babies are born alive and that they have a better start in life because of the better mental and physical condition of the mother and the relative absence, in the milk, of the toxins produced by prolonged suffering and physical exertion.

LEMON JUICE AS AN ANTISCORBUTIC

Chick, Hume and Skelton of the Lister Institute have been investigating the comparative antiscorbutic value of limes and lemons. Their results are published in the November 30, 1918, number of *The Lancet*. They have ascertained the following interesting fact as a result of their experiments

upon monkeys and guinea pigs, i. e., that the value of fresh lemon juice as an anti-scorbutic is approximately four times that of fresh lime juice. The latter seems practically valueless in the prevention of scurvy.

A PROPHYLACTIC FOR PNEUMONIA

In a paper by Lt. Col. C. N. B. Camac (*Amer. Jour. Med. Sciences*, Dec. 1918), reporting some cases of lobar pneumonia treated with antipneumococcus serum at Ft. McPherson, Georgia, he states: "Dichloramine-T in chlorcosane, 2 percent, was used as a throat spray for attendants and with some of the cases. In cases of measles, we found that pulmonary complications were less frequent when this treatment was employed."

SUDDEN DEATH AFTER INTRAVENOUS INJECTION OF NEOSALVARSAN

In the *Gazette des Hôpitaux* for January 23, Doctors Courtois-Suffit and Giroux published an account of a very unfortunate occurrence that took place in the office of a Paris physician. A young married woman, thirty years of age, affected with syphilis, had consulted this physician with a view of undergoing energetic treatment. Clinical examination as well as a positive Wassermann left no doubt of the nature of the malady and a course of intravenous injections of novarsenobenzol was undertaken, commencing with small doses and increasing gradually at intervals of between eight and ten days. Shortly after the eighth intravenous injection, the patient suddenly complained of feeling ill, convulsions supervened, pulse became small, respiration stertorous, and, despite the usual emergency measures, such as, injections of adrenalin and of camphorated oil, artificial respiration and so forth, the patient expired two hours after the intravenous injection had been administered.

Suit having been brought by the family of the patient against the attending physician, Doctor Courtois-Suffit was charged with making the autopsy which, though, gave negative results throughout.

Since the fatal accident had not taken place until after the eighth injection, it is hardly proper to assume an arsenical in-

toxication, for the reason that, in intravenous injection of arsenical remedies, the elimination takes place promptly. Anaphylactic or anaphylactoid accidents, small intravascular coagulates that can not be discovered during the autopsy, may, on the other hand, explain the death in this instance.

The authors conclude by declaring that they have no desire whatever to criticize the therapeutic procedure of administering novarsenobenzol by intravenous injection, since the efficacy of this method is indubitable and the clinical results are remarkably rapid and good. Moreover, such serious accidents, fortunately, are extremely rare. The authors of this article refer to the publication by Dufour, in *Paris Médical* of 1914, on the subject of reflex therapeutic epilepsy and which possibly might have some relation to the case in point.

THE DISADVANTAGES OF IODIDE OF POTASSIUM

In the *Bulletin des Hôpitaux de Caracas*, Doctor Avny (*Monde Méd.*, Jan., 1919) has recorded the results of a study concerning the mode of action of iodide of potassium. Among some of his interesting conclusions are the following:

Iodide of potassium, which is not anti-septic, is an active remedy in syphilis and actinomycosis.

Small doses are insufficient in the treatment of these maladies.

The so-called intolerance to potassium iodide is due mainly to a diminished alkalinity of the tissue fluids.

The manifestations of iodism are counteracted by alkaline treatment by means of bicarbonate of sodium in large doses.

In persons whose tissue fluids are alkaline, iodide of potassium is well tolerated.

This explanation of the causes that so often lead to symptoms of iodism during the prolonged ingestion of potassium iodide is of great interest and accounts, at least in part, for the fact that other preparations of iodide, such as iodized calcium, are tolerated far better than the potassium salt, yielding the same beneficial clinical results, while accidents of iodism are less frequent. However, the implied suggestions of adding sodium bicarbonate to iodide preparations, if they are taken over long periods of time, seems to us

logical and worthy of adoption. In addition, however, to a form of iodine that is not open to the objections proved against the potassium salt, it will be well to prescribe the concomitant taking of alkaline preparations, such as saline drinks, for instance, when iodides are taken in large doses or over long periods of time. The idea is, of course, to assure a satisfactory and complete elimination of the iodine so as to prevent systemic disturbances.

THE TREATMENT OF SYNCOPE BY MASSAGE OF THE HEART

At a recent meeting of the Surgical Society of Paris, France, an experience of Doctor Lefèvre was reported by Doctor Mauclaire (*Paris Méd.*, Feb. 1) concerning a wounded soldier, in whom it was necessary to open the thorax on account of a wound in the lung. Immediately after the operation, which lasted twelve minutes, syncope supervened, the cessation of the respiratory action being followed by that of the heart, while none of the customary measures was effective in resuscitating the patient. After twelve minutes of unremitting effort, Doctor Lefèvre opened the thoracotomy-wound, introduced his right hand into the thorax, and undertook direct massage of the heart. It was necessary to manipulate this organ for more than half an hour before the cardiac contractions had resumed their normal rhythm. The patient regained complete consciousness, but, nevertheless, succumbed twelve hours later without an apparent cause. There had been an injury to the spinal cord at the level of the fourth dorsal vertebra and the author suggests that, possibly, this was responsible for the death.

In the discussion, Doctor Mauclaire mentioned that there were known sixty-eight observations of massage of the heart of which fifteen had been successful, while in sixteen the cardiac contractions were restored temporarily and in thirty-seven the manipulations entirely failed to cause renewed action of the heart.

Doctor Baudet referred to the necessity of differentiating between respiratory and cardiac syncope in anesthetic accidents. In two attempts at direct massage of the heart, he found in one case that he was dealing with a true cardiac syncope, in which massage and electric stimulation of

the heart proved unsuccessful, but, in the other case the heart reacted perfectly, although the lung remained without motion. In this last case, rhythmic traction, as well as electric stimulation of the lung, were unsuccessful. Very gradually the heart beats diminished in force and finally ceased definitely, neither massage nor electric stimulation being able to restore them.

Doctor Le Fort reported that he tried, on three or four occasions, to massage the heart directly but without success. The same experience was reported by Doctor Pierre Delbet in two cases in which the syncope was due to cerebral anemia.

Doctor Duval prefers, in cardiac syncope, the injection of saline solution into the left ventricle, while Doctor Quénu is of the opinion that, if an assistant informs the surgeon of the exact moment when the pulse beats are arrested, vigorous stimulation of the trigeminus and slapping of the face will be successful in reanimating the heart.

Doctor Chevassu has seen a man whose heart had been injured by a knife thrust and who had actually been bled to death, in whom, however, life was restored for twenty-four hours by transthoracic massage of the heart.

Doctor Sencert recalls that he has reported, more than ten years ago, an experiment, together with Doctor Lambert, according to which, in animals that had been completely bled to death, the heart's function could be maintained artificially by continued injections of suitable saline solutions into the heart cavities. The ordinary normal saline salt solution, however, is not sufficient, the injections requiring calcium as well, which has been found indispensable for this purpose.

"CARRY ON."

We have received the fifth number of *Carry On*, a magazine devoted to the reconstruction of our disabled soldiers, sailors and marines. This interesting little magazine has been referred to before now in this journal, and merits general support. The latest number contains some very interesting communications among which are the following:

"Sand", by George Barr McCutcheon.

Mr. McCutcheon, in his interesting style, tells in dialogue form of the fighting spirit

of the marines who will "carry on" in civilian life as they did in Belleau Wood and Chateau Thicerry.

"Leaving Too Soon", by Colonel Frank Billings.

Colonel Billings is Chief of the Division of Physical Reconstruction. In civil life he is Doctor Billings of Chicago, and one of the best-known men of the country. This article is an appeal to the relatives and friends of wounded men to urge those who are convalescent to stay in the hospital as long as treatment is necessary.

"Paying a Draft of Honor", by Charles H. Winslow.

The Federal Board for Vocational Education emphasizes again the opportunities open to the disabled fighter in industry.

"Do It Yourself", by Captain Arthur H Samuels.

This is an appeal to the people of the country to consider the restoration of the disabled man to civil life as a personal obligation—not as a matter for merely sentimental sympathy.

"How I Commandeered My Left Hand", by W. A. Rogers.

An unusual experience told in a most interesting way by the well known cartoonist of the *New York Herald*.

THE BACTERIOLOGY OF GRIP

At a meeting of the French Academy of Medicine, recorded in *Paris Médical* for February 1, Doctor Meunier, who had undertaken detailed bacteriological investigations during the grip epidemic, reported that during the first period, last spring, only the coccobacillus of Pfeiffer had been found and that the cases of grip had been generally mild. During the recurrence of the epidemic, last August, the Pfeiffer-bacillus still was frequent, although very often it was associated with the pneumococcus. Later on, this latter was found more frequently and even exclusively, though often in association with the streptococcus, and, in that case, pleuropulmonary complications came to be observed.

Doctor Meunier believes that, even if the microbe of the grip is a filterable bacillus, the Pfeiffer-bacillus nevertheless is an important factor in the etiology of the disease.

In connection with this report, Doctors Besançon and Legroux referred to a mi-

rococcus aureus discovered by them and that is of importance in association with other microorganisms, for instance the Pfeiffer-bacillus, all of which probably determine the complications of grip.

Heated cultures of the various micro-organisms incriminated have been utilized in the Pasteur Institute for the preparation of a polyvalent vaccine. In certain cases, Doctors Besançon and Legroux have observed, under the administration of this remedy, a reduction of the temperature as well as a diminution in the duration of the illness, even though this already was complicated with pulmonary manifestations.

THE ORAL HYGIENE IN GRIP

During the discussion on grip before the French Academy of Medicine, referred to in the preceding article, Doctor Pierre Robin expressed the opinion that a well-executed oral hygiene would make it possible to prevent complications in the course of grip and also to avoid endangering others by contact. Doctor Robin described a new method for the purpose of securing asepsis of the mouth and teeth, recommending especially the employment of Ringer's solution, as modified by Netter, and by solutions of bicarbonate of soda.

"WHEN DO WE EAT?"

"When do we eat?" the first question fired at the American people by the returning heroes as the first big troopship steamed up the North River bearing the van load of our brave lads from "over there," may not be as inspiring as some of the lofty utterances brought forth by the war, but it is so typically boyish and human that it will long be remembered.

And who answered that question?

Individual mothers could not give the first greeting to their loved ones but "the Greatest Mother in the World" was waiting in their place and provided every possible comfort, including "the eats."

The Red Cross Canteen workers were the only people allowed on the pier, with the exception of the official committee, and they made good their welcome to the boys with thousands of sandwiches, sugar buns, coffee or chocolate and cigarettes.

The boys eat whenever the Red Cross canteen meets them.

Let's Talk it Over

Studies on Food Economics

Alcohol as a Food

[Continued from February issue, page 135]

SINCE writing the above, I have come across the reports of a series of experiments by Dr. Emil Kraepelin, professor of mental diseases in the University of Munich.

"A group of men—who were kept in ignorance of the real nature of the tests, who understood only that they were expected to persist to the limit of their endurance—were capable of a definite average quantity of work."

This average was determined with almost mathematical certainty by experiments made dozens of times, under absolutely similar conditions as regarded time of day, food, exercise, and surroundings.

"A good index of the degree of a man's capability for work is the weight he can continue to lift with the index-finger of his right hand."

So, the ergograph, a celebrated laboratory device invented by Prof. Angelo Mosso, was brought into requisition. In manipulating this, the fingers were clinched round a wooden peg (all but the index-finger), the arm held immovable by being clamped to the arm of a chair. A weight of several kilograms, suspended by a small rope that passed over a pulley, was raised and lowered until the subjects were forced to desist from exhaustion. This process was repeated twelve times, with rests of a minute intervening—like the rounds in a boxing-contest. Each pull was automatically recorded by a pencil on a strip of paper, registered by a line. The sum of the lengths of all the lines was translated into "meterkilograms", which meant, the work accomplished by raising one kilogram one meter against the pull of gravity. These experiments repeated made ten times a day, and the total average of each man was calculated for a number of days, under condi-

tions of absolute abstention from alcoholic drink.

Then the men were given the alcoholic equivalent of a "good glass" of Bordeaux wine after each meal, and the experiments were repeated. The consequences were, a diminution in the subjects' ability to withstand the fatigue of weightlifting, amounting to an average of from 7.6 to 8 percent. These experiments were repeated hundreds of times, by scientists in various parts of Europe, and always with a similar result. In every instance, a definite measurable loss in muscular efficiency was demonstrated.

Having shown these effects on resistance to fatigue, the learned professors advanced to the consideration of principles involving combined muscular and mental processes.

The "writing-balance", invented by Professor Kraepelin, was subpoenaed as chief witness in this case. This ingenious contrivance had attached to it a fifth-second chronometer, which automatically registered time on a rotating drum covered with carbon-paper. On the record obtained in this manner, the time required in writing a set of characters can be computed with an error of less than 1-200 of a second. The unit of time in which the trials were based was called a "zeta" and corresponded to 1-100 of a second.

The daily exercise began at 8 a. m. The subject's hand was connected with the apparatus, and the figures 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 were written twice with pencil at top speed. Then the sequence reversed—10, 9, 8, 7, 6, etc.—was twice written. Then the German letters "inm" also were twice written. These were repeated ten times, and the total average time consumed by each man was measured.

Then each received his allotment of wine, as with the ergograph-experiments. After five minutes, they resumed their writing,

carrying out their appointed task in scribbling as before—and proved that, while the spirit was willing, the flesh, and its controlling nerve-impulses, was weakened; for, they had, every man of them, measurably slowed up.

The degree of retardation, after writing 1 to 10 under the influence of the small amount of alcohol administered (about what the ordinary drinker would take with his dinner) amounted to 5.6 percent. In writing 10 to 1, the retardation was greater, amounting to 7 percent. This was accounted for by the increasing complexity of the stunt, it being a more novel combination than the straight progression of numbers. With the "inn", the deviation from normal was even more apparent, averaging 7.3 percent. Again and again these same general results were secured. New crews were used for each demonstration.

Similar results followed in the coordination-tests, when the subject was required to "snap down" a telegraphic switch at the unexpected flash of a light or sound of a gong, the time elapsing between the flashing of the light or striking the gong and closing the switch being measured by the "zeta" chronometer. In every case, the rapidity of the coordinating responses were decreased from 6 to 8.3 percent.

Next, a number of accountants of all grades were selected and their average ability to add one-figure columns was estimated for one week. They were then given daily, in divided doses, the equivalent of 3½ cups of claret wine. A marked and progressive diminution in their output was noticed, beginning with 3.1 percent on the first day. After two weeks of this steady, moderate alcoholic allowance, the percentage increased to 15.3.

Similar experiments were then tried on typesetters. These were required to set type from printed pages (to insure absolute uniformity of copy) and the total number of ems a day was computed for a week. Then, with daily "gentlemanly" drinks, they lost an average of 9.6 percent in efficiency by the end of the week.

Perhaps the most convincing observation was concerned in the "free association of ideas." This, when the condition is raised to the fourth dimension, causes the party of the first part to forget his watch and chain, the number of the house in which he lives, and his wife's first name. He is then in a state for which the vulgar have a

variety of picturesque names. The scientists call it "alcoholic inhibition," and they can usually define the gradients with precision.

However, we are now considering alcoholic inhibition in embryo—before it grows up and develops, as it were—and the various methods employed in classifying its general characteristics.

To illustrate: If the name of an object is spoken, immediately one thinks of something in connection with that object. Professor Kraepelin's subjects were requested to write these ideas down, enumerating as many associated objects as occurred to them in the space of five minutes. Two words were given out at each séance, five minutes being allotted to each subject. This was repeated at intervals during the day, for ten days, and the average number of suggested things reckoned up. Then, each evening preceding the next ten days, a generous "nightcap" was donated and the results of the following ten-days' "association" were computed. A loss in coordinating power in this series amounted to as high as 27 percent."

Doctor Bower, who reports these experiments, says, Doctor Kraepelin considers that alcohol is a narcotic, first, last, and always; also, that the stimulation is merely imaginary (I believe he might have added, that it is an anesthetic, like ether and chloroform).

Dr. Bower, summing up these demonstrations, thinks they prove conclusively, "that one who drinks much is living only a small part of his normal life."

Seeing the proved evils of the drink-habit and the great expense it entails on the nondrinking public, it seems to me a rank injustice to the latter to legalize the saloon.

A. T. CUZNER.

Gilmore, Fla.

IODIZED CALCIUM FOR THE COUGH OF GRIP

The most satisfactory remedy for the distressing cough attending influenza, and all catarrhal troubles this season I have found to be iodized calcium.

Leave with the patient, when racked with the most distressing cough, four or five large 5-grain tablets of iodized calcium, with instructions to chew and swallow slowly one tablet as needed. When you call the next day, you will find some of these

tablets not used. The patient will say: "The first tablet stopped the cough, and I have not really needed the rest, although I took one or two from time to time, as I feared the cough might return."

No further comment is necessary. You who are familiar with these tablets know the prompt and satisfactory way in which they act in these cases.

There is much said nowadays about the influenza, and its treatment, and some rather dogmatic teaching about influenza and pneumonia by means of quinine is interesting.

More than forty years ago, quinine was, in the minds of some, *the* remedy for pneumonia, but, like all medical gods, it had its induction, its worship, and its decline. I well remember a remark made in the late '60s by my brother, the late Dr. I. G. Cope, of Colerain, Ohio, relative to the quinine treatment for pneumonia. He had been a surgeon in the Civil War and was an expert physician. He said that doctors were being misled by this teaching, for, quinine was not a specific, and those that were advocating it would be condemning it a few years hence.

At that time, a promising young lawyer at St. Clairville came down with pneumonia and the word came to us in his home township. Thereupon, my brother said: "I do hope they will not fill Joe up with quinine. If they do, it will kill him." It turned out that this was a true prediction. The St. Clairville physicians, firmly believing in the efficacy of quinine, gave it to the limit. He did not recover. This gave a severe setback to the quinine-treatment in that vicinity, as Joe was a well-known and most promising young man.

I do not decry the use of quinine, but, would suggest that everyone use his judgment and treat the patient, and, not the disease. Quinine, I think, owes its power (aside from its value in malaria) to its action as an intestinal antiseptic.

Note, there are many others.

Reverting to pneumonia: There is a statement getting wide publicity at this time that needs looking into, namely, that pneumonia is a contagious disease.

More than twenty years ago, such a statement was published, and, in talking to the late Dr. J. G. Connor, of Ionia, Michigan (who, by the way, had been a surgeon in the Civil War and whose years

of medical experience there were many more than mine), said: "I do not recall that I ever had more than one case of pneumonia in one family at the same time." I then began to recall to mind my own cases, and, strange to say, my experience coincided with that of Doctor Connor, exactly. Since then, I have watched this question, and I can truthfully say that I have never had two cases of pneumonia in one family at the same time—never two cases of pneumonia following each other in the same family.

I should not wish to stay the watchfulness that is secured by prevention. All I wish to do is, to say, Watch, work, wait, use your own head, and take, with some allowance, anything that is not self-evident.

C. S. COPE.

Detroit, Mich.

A SUCCESSFUL TREATMENT FOR INFLUENZA

No doubt this letter will be a surprise to you, however, I feel it my professional duty to say a word relative to the use of iodized calcium in influenza-cases, hoping that some brother practitioner that has been overburdened with bronchopneumonia following an attack of influenza will profit by my experience.

Our town, the same as all other places, has had the epidemic, and I have treated 165 cases without a single death occurring, and I attribute this excellent record to the free and unlimited use of iodized calcium. I give this preparation to the little, the big, the old, and the young alike, and it is surprising to see how quickly the secretions loosen up and how little of bronchial irritation remains after the lapse of two or three days. I have had several cases of bronchopneumonia (7 or 8), but, they were all in patients that had treated themselves, throughout their attack of the influenza, with "teas", plasters, hot lemonade, and so forth; but, when the complication supervened, they called for my services, saying that they had had a "backset." In the course of the pneumonia, I do not stop the iodized calcium, but, continue its use along with the usual pneumonia-prescriptions.

Now, I do not wish to be quoted as saying that iodized calcium is a specific; I do

say, however, that its use in influenza will yield splendid results.

At the onset of an attack, I always clean out the intestinal tract with minute doses of calomel, followed by a laxative saline, while, for the general aching, I secure splendid relief with a few doses of aspirin. If the stomach is deranged, I withhold all food for twenty-four hours, then put the patient on milk, broth, rice, and fruit-juices, and add freely the semi-solids as the patient demands.

I impress strongly upon the minds of all patients the necessity of staying in bed for at least three or four days after they feel that they are well, and thus, I have experienced no trouble.

In my 15 years of active duty as a country physician, I have not written many articles for publication, but, as said, I feel it my duty to say a few words on this subject, as the death-toll from influenza throughout this country of ours has been appalling; so that, if I have said anything that may prove of benefit to any reader of the journal, I am sure I shall be pleased and fully repaid for the time spent in writing of my experience. Best wishes for CLINICAL MEDICINE and all its numerous readers.

A COUNTRY DOCTOR.

[Thank you, doctor; and "come again." Your 15 years of country practice must have given you much that would be of interest to others. Iodized calcium is a dependable remedy and should be employed more generally.—Ed.]

SIGNIFICANCE OF BLOOD IN URINE IN INFLUENZA

I read Doctor Croft's article (this journal, Dec. 1918, p. 889) with deep interest, but notice that the urine is not mentioned. I have never seen a patient with "flu" get well that had blood in urine with the first fever symptoms.

Also, I have observed that there is a large percentage of cases showing sugar in the urine. The urine of every influenza patient should be examined repeatedly, as elimination can not be overlooked.

G. L. CROCKETT.

Thomaston, Maine.

[Here are two important points with reference to the prognosis and to possible

complications of influenza. Has the serious significance of blood been noted by others? It would be interesting to study urinalyses of a series of cases comparing them with the clinical histories. Perhaps Doctor Crockett will prepare such a study for CLINICAL MEDICINE?—ED.]

THE "GRIP" TRAGEDY: ITS GENESIS

Concerning the etiology of influenza, Supplement No. 33 to the *Public Health Reports*, Sept. 27, 1918, carried the fundamental statement that "The mere preponderance of a certain organism in the respiratory tract can not be accepted as proof that it causes the disease."

Since the days of Thomas Hobbes, 1588-1679, invariable presence, only, is conceded to entitle an "accident" (a bacterial organism for instance) to rank as cause; it must be found in every case without exception. Hobbes defined cause as "the sum or aggregate of all such accidents, both in the agent and the patient, as concur in producing the effect propounded; all which existing together, it can not be understood but that the effect existeth with them; or that it can possibly exist if any of them be absent."

The influenza bacillus of Pfeiffer (1892) instead of being invariably present and, therefore, "the specific causative factor in the present pandemic," has been notoriously conspicuous by its absence. Bacteriologic studies and reports of the pandemic in Europe show that the influenza bacillus was found only exceptionally. Friedmann and Gruber, in Berlin, failed to find the organism; so also with Kolle, of Frankfurt, in any of the cases he had thoroughly examined. Only three or four cultures out of a total of 184 examined and studied by workers at the State Laboratory, Trenton, N. J., showed Pfeiffer's bacillus with or without other organisms. The Massachusetts State Laboratory also found the organism in only a relatively small number of the 189 specimens examined. So B. Pfeiffer has a perfect alibi in the matter of causing the great "grip" tragedy.

This demonstration is of the utmost importance in view of the fact that the Pfeiffer bacillus was held to be responsible for the virulence and contagiousness of influenza. Not only is the non-contagious character of the disease now proven, so far B.

Pfeiffer is concerned, but, also, by application of the same rule the whole alleged etiological flora of "grip" is negatived as causing that disorder.

Cultures from cases of Dr. Hyman L. Goldstein, Camden, N. J., were studied at the State Department of Health Laboratory, Trenton, N. J., specimens being from sputum, nose, or throat (this journal, Dec. 1918, p. 903). It was found that streptococci, alone or with other organisms, appear in 114 of these 180 specimens. Absence from 66, or 36.7 percent of these cases, and from about 50 percent of the 189 specimens examined at Mass. State Laboratory, certainly excludes this organism as the "causative factor" in the influenza-pneumonias. Not only so, but streptococci and micrococci are constantly found growing on the skin and on the mucous surfaces of healthy people. These bacteria are also found in the tonsils and lymph glands. Since they have been shown not to be a causative factor in pneumonia or grip, and besides are known to be "constant parasites, or perhaps rather commensals of man," (Chapin, "Sources and Modes of Infection," 1916), it is obvious that quarantine and the use of masks is of no utility in preventing these diseases.

Among recent confirmatory observations may be mentioned those of Ruediger, Chicago, 1906; Gordon, London, 1904; Hess, Jena, 1907. These authorities are quite unimpeachable; besides, the facts stated with reference to the general distribution of bacteria, are doubtless well known to physicians generally, particularly those who affect surgery; so, we may confidently expect that cultures from the nose, throat, and sputum of 180 healthy persons would give a fairly exact duplication of the results at the N. J. State Laboratory referred to in the foregoing.

The New Jersey State Laboratory found pneumococci absent in 95 percent. of their 180 cultures above mentioned. Massachusetts State Laboratory found these organisms absent in 46 percent. of their series. When present, the incidence of types was not very different from the distribution of types in the mouths of healthy persons according to investigations carried out at Rockefeller Institute in which were examined 116 normal persons harboring pneumococci. The note concludes: "Our results seem to indicate that the influenza-pneumonias, when caused by pneumococci,

were due principally to autoinfection." That the coccus of pneumonia is present in the saliva of normal mouths, was early recognized by Pasteur, Sternberg and Welch; a number of others confirm these findings, of which mention may be made of Park and Williams, N. Y., 1905. Obviously, again, quarantines and masks would have been futile in preventing these cases, since pneumococci have been excluded as cause and shown to be practically permanent residents with their human host.

But, if bacteria do not stand in causal relation to the pandemic, what, it may be asked, is the relationship in which they do stand to the disorder? Necropsies have made quite plain the answer to this question; pathologists assign bacteria to a connection with secondary effect, the findings in particular cases naturally varying with the bacterial flora, and other circumstances, of individual patients, all the different organisms suspected of complicity in causing "grip" being of well nigh universal distribution as has been shown.

Thus it is proved, absolutely, that bacteria do not exercise causal functions in extending this scourge. Indeed, as has been noted by many competent and reliable observers, it often goes faster than men travel; sometimes by jumps to isolated places.

While the respiratory type is more common, there are many cases, as every physician knows, in which the respiratory tract is not at all involved. In the gastrointestinal type, onset is with nausea and vomiting, or abdominal pain and diarrhea. Jaundice may be present and the spleen often is enlarged; but, there are no nose-, throat-, or lung-complications or sequels in this form of influenza.

In the nervous type, there is severe headache, pain in the back and joints and great prostration, but, catarrhal symptoms are not marked. Now, the not infrequent occurrence of these last mentioned types, without respiratory manifestations, positively excludes the respiratory type as a primary form of the disease.

And, so, we may say with the utmost assurance that, in its inception, socalled epidemic influenza is neither contagious, infectious, nor communicable. Local symptoms are preceded by abnormal systemic conditions in which cosmic influences are a large factor.

How do the bacteria, which we find associated equally with health and disease, be-

come pathogenic in the influenza-pneumonias? Following Sir Almroth E. Wright, it has been said substantially that "Any bacterium which can grow and multiply in an animal may be pathogenic to that animal. Given the capacity of metabolizing within an animal, the pathogenicity of a bacterium is dependent upon the non-specific normal ferments of that animal; if these be rapidly destructive, the bacterium can not be pathogenic to that animal, because it can not increase sufficiently to furnish a toxic amount of poison."

According to Wright, then, the incidence of influenza would depend upon bodily condition, with special reference to "the non-specific normal ferments." In other words, and from the standpoint of treatment, the disorder is always with us. The place of bacterin, or "vaccine," treatment is hereby made to appear; also its limitations and the results that may be reasonably expected from its use.

Summary: No single organism, or group of bacteria, causes socalled epidemic influenza.

The respiratory type is not a primary form of the disease which is neither contagious, infectious nor communicable. It has its genesis in abnormal systemic conditions induced largely by cosmic influences.

Attention to personal hygiene, rather than regulation of the public by constituted authorities, certainly is the best means of warding off the scourge.

ELMER F. GOULD.

Camden, Me.

[We are inclined to congratulate ourselves upon the rule that the editors are not to be held responsible for opinions and assertions expressed in signed communications. Personally, we confess our inability to view the bacterial factor, or factors, in influenza as anything but a very serious and important one. What do the readers of CLINICAL MEDICINE say?—ED.]

A CORRECTION

Dr. W. S. Cline has called our attention to the fact that in his little article in the January number (p. 53), we have made him confess to a mortality of 100 percent in his cases of influenzal pneumonia—"I had 5 down with pneumonia and lost them all". What Doctor Cline actually said was:

"I had 5 down with pneumonia and lost one". We cannot explain how this error crept in, but we apologize to the Doctor for it. Please make the correction in your Journal.

FOR BRIGHT'S DISEASE— A SUGGESTION

I have just read an article entitled "Definite Medication." I wrote the author to use Abbott's alkaloids and he would need nothing more definite and few other remedies. Iodized calcium is one definite drug; and Syrup of the iodide of iron, for Bright's disease, is another. If you have a friend who is treating a case of Bright's disease, get him to try the syrup of the iodide of iron, 15 drops three times a day, with 1 to 2 drams of cream of tartar in a glass of water, drunk during the day, in association with a milk diet. You will see wonders. I am as certain it will do the work as Abbott is of iodized calcium.

W. S. CLINE.

Woodstock, Va.

[The present editorial writer recently had occasion to employ the syrup of the iodide of iron in several cases in which the main feature was an irritated condition of the lymphatic nodes. The results were as surprising as they were prompt. In nephritis, we have not seen this remedy employed, but, we are strongly inclined to order it, right now, to two victims of that serious disease. Strangely enough, by the way, they are mother and daughter.—ED.]

INDUSTRIAL MEDICINE

Manufacturing interests throughout the country are becoming impressed with the vital necessity of properly safeguarding the lives and health of employes, not only from the viewpoint of the new humanitarism, but from a sense of business foresight.

The demand upon the newly established Working-Conditions Service, of the U. S. Department of Labor, for industrial physicians and surgeons, has grown so rapidly that the Service has been compelled to establish a bureau of registry of physicians trained and skilled in this growing phase of medical and surgical specialization.

The new registry bureau is prepared to furnish industries with the names of

skilled industrial medical advisers on request. The demands for competent medical directors for the factory department of hygiene are being met by the Service with an adequate list of physicians, all of whom have had experience and training in this particular function. Hundreds of such physicians are listed in the Government's registry bureau in Washington and hundreds are being added to the registration files.

In each instance, the Service satisfies itself of the training of the physicians before their names are allowed on the list. Thus, only those best qualified are listed and manufacturers have the advantage of knowing that, by availing themselves of this Service, their dispensary section will be in competent hands.

In addition to submitting names from the physicians' registry bureau, the Service is making investigations—only on request, however—of the general facilities for protecting the lives and health of employes. This work is carried on from branches of the Service now being established within easy reach of the nation's industrial centers. When such surveys are concluded, a report of the findings, with recommendations, is delivered to the responsible head of the particular industry. In this manner, industries are assured reliable and unbiased information from authorities who have studied industrial problems exhaustively, with expert training in hygiene, sanitation and related subjects.

DR. A. J. LANZA, Chief.

Division of Industrial Hygiene and Medicine.

Washington, D. C.

[Doctor Lanza, the chief of the Division of Industrial Hygiene and Medicine, was detailed to this work from the U. S. Public Health Service. The undertaking presents new openings and wonderful possibilities to

physicians who possess the requisite training. The opportunity here offered should, we believe, appeal particularly to many medical officers now being demobilized and who had, on entering the Army, given up their location and practices.—ED.]

DOCTOR FARRAND APPOINTED HEAD OF RED CROSS

Dr. Livingston Farrand, President of the University of Colorado, has been appointed



Dr. Livingston Farrand,
Chairman of the Central Committee of the American Red Cross

by President Wilson as Chairman of the Central Committee of the American Red Cross, to succeed William H. Taft.

As Chairman of the Central Committee, Doctor Farrand will become the executive head of the National Red Cross organization on the retirement of the War Council, which will take place March 1st.

In changing the Red Cross from a war

to a peace basis, far greater tasks will be involved than those undertaken during the ante-war period, tasks that will require the full time of those entrusted with the executive duties.

Since the entrance of the United States into the war, Doctor Farrand has been the director of the tuberculosis work of the International Health Board in France, and has been in close contact with Red-Cross activities. His broad knowledge of European conditions, his high executive qualifications and the vital force of his very unusual personality will all be vital factors in increasing the usefulness and broadening the scope of Red Cross work.

That the program of the American Red Cross under peace conditions will be virile, statesmanlike and broad is unquestioned.

REPLYING TO DOCTOR MARNER

In reply to Doctor Marner's article appearing in the January number of CLINICAL MEDICINE, (p. 56), I feel constrained to call his attention to two books, either of which can be had for 50 cents and needed postage. These are, "Christianity, and the Social Crisis," by Walter Rauschenbusch, and "Poverty and Wealth," by Harry F. Ward. I am sure that, if the Doctor will read these books, he will revise some of the rash statements made by him.

Regarding the medical part of his article, I think that the editor has answered him sufficiently.

JOSEPH PESTAL.

Lamar, Colo.

A SINK-FEINER PROTESTS

On page 62 of your January issue, I read the following: "Sir Roger Casement (executed for treason) . . . and the Sinn-Feiners in Ireland, classed as Socialists, without a country and without a soul, hated of God and despised by man."

I regret very much that CLINICAL MEDICINE can be used to abuse a noble and patriotic people, whose laudable aim is, to govern themselves, as did our revolutionary forefathers. I deem Sir Roger Casement a second Ethan Allen and his Green Mountain boys that went forth, suffered, and died for the love of their country and its freedom. Were not George Washington, the Minute-Men, the signers of our Declaration of Independence all Sinn-Fein-

ers? I believe they were and set the Irish people a good patriotic example. Your Iowa Tory contributor, whose name is not worth the writing, I believe would enjoy being on the firing-line, to shoot to death, for treason, George Washington and his followers in the days of '76.

Stick to the science of medicine and avoid the snares of low grade, unpatriotic, panoramic, anglo-maniac politicians, who would poison the minds of the American medical profession through your journal, that they, in turn, may spread, unthinkingly, the disease-producing bacteria of monarchy. Out of the country with such men!

J. H. McGANN.

Barton, Md.

A SOCIALIST'S VIEW

I am past 71. My references are, anyone where I have lived. I believe in the economic teachings of Jesus. I believe in Socialism, because its basic principles are absolutely just and true; namely, that everyone should receive the full social value of all that he produces, and not be compelled to divide the profits of his labor with the so-called employing class.

Socialism teaches, firstly, that all public utilities, all land, railroads, factories, and many other things should be owned democratically, managed by the wealth-producing masses themselves, and be operated solely for their own benefit.

Secondly, it teaches that all private property, including homes, pianos, vehicles and horses or any property used by oneself for one's self, and not for purposes of exploitation, should be owned and controlled by the individual.

Thirdly, the abolition of the wage-system and the substitution therefor of the system of joint ownership by all the people. Such a system would insure employment for all and prevent either great wealth for the few or poverty for the masses.

These are the basic principles of the "demon" Socialism so feared by Doctor Marner. (see the January issue, p. 58). Socialism is well illustrated, so far as it has been adopted in this country, by our public-school system, and I hear no remonstrance voiced against it, nor even is it asserted that it is leading our children to ruin; and I am sure that even Doctor

Marner would not wish to change back to a private-school system.

Socialism has nothing to do with one's religion. Believers in it are to be found in every clime and among all races. I am greatly of the opinion that a few courses in calomel and podophyllin and saline laxative, to clear his think-tank, would cause the Doctor to see things and "isms" as they really are.

W. A. TURNER.

Lodi, Calif.

AUTOINTOXICATION

The longer we practice medicine and the more we study this subject by careful clinical observation, the more we are convinced that the question of autointoxication is one of the most important subjects now before the medical profession. There are few diseases, if any, that are so far-reaching in their possibilities, in their effect upon the animal-economy. We are aware that there are some physicians that laugh at the term autointoxication and say that the thing is a myth and originated in the mind of some physician that wished to be different from the rank and file of the profession. But, we want to say that autointoxication is no will-o'-the-wisp or imaginary condition, but, a real disease, a disease in which every organ and tissue of the body may be affected; and that few people live to old age without suffering from it at some time during their life. It may be so mild that we are in doubt as to its existence or it may be so severe as to cause death.

That the reader may better understand the subject, we will try to answer, briefly, the question what autointoxication is.

It is a poisoning of the system from within. The poisons and toxins that are generated within the system are reabsorbed into the blood stream and thus poison the individual, producing a train of symptoms that are characteristic of the condition. In other words, it is a subtle poisoning of the general system from the absorption of bacteria and their toxins, and of poisonous chemical compounds formed within the body. Little by little these poisons are absorbed into the blood stream in quantities beyond the power of the eliminative organs to deal with successfully.

The Cause: This condition may have its origin in the liver, kidneys, spleen or intestinal tract or in a combination of these;

but, at present, we will confine ourselves to treating only of the cause as it arises from the intestinal canal.

When autointoxication arises from the intestinal tract, it is the result of "intestinal stasis". And now you will ask, "What is intestinal stasis?" This condition is an abnormal delay in the passage of the contents of the intestinal canal through a portion or several portions of its length. This may be gastroenteric, gastroenterocolonic or the whole length of the canal may be sluggish and thus the contents of every part be delayed.

In whatever segment this retardation occurs, it not only allows but favors the rapid development of all kinds of bacteria inhabiting that part of the alimentary canal. Hence, bacteria, toxins, and various chemical poisons are absorbed into the blood stream. And this process of absorption goes on so insidiously that the patient is not aware of its presence until the system is saturated and his health is badly undermined. Even then he has no idea of what has overtaken him.

The eliminative organs soon become crippled, as it were, and their normal functions impaired; hence, they allow still more poison to accumulate. The lymphatic system also is soon poisoned and, in consequence, fails to guard the blood stream by not being able to convert poisons into innocuous substances as it does normally.

In intestinal torpidity or stasis, many abnormal conditions occur, the contents become putrid and constitute a "hotbed" favorable for the development of all kind of organisms ordinarily present in the intestines, besides many new, or extraneous, strains of bacteria.

These organisms and the toxins resulting therefrom, together with various chemical poisons, are absorbed and find their way along the ducts leading from the alimentary canal and in due time reach the blood stream. By this, they are carried to every part of the animal-organism, producing progressive degenerative changes in various organs, the cause of which is a mystery to those that know nothing about intestinal stasis and its relations to autointoxication.

Sir W. Arbuthnot Lane, probably the greatest authority on this problem, writes as follows:

"Obstruction to the normal onward movement of the alimentary contents, such

as kinks, bands of adhesions, dependent loops of intestines, displaced viscera, tumors, and many other conditions favor and produce intestinal stasis, so that in such conditions the intestinal contents stagnate or move on so abnormally slowly that fermentation and putrefaction produce an enormously large bacterial flora or form toxins which, by absorption, are distributed more or less extensively throughout the body".

This statement is very true; however, it should be remembered that intestinal stasis can, and does, occur without the presence of kinks, bands of adhesion or any abnormal formations.

Many writers hold that ptosis is the main cause of intestinal stasis, while others assert that stasis is a frequent cause of ptosis. Let this be as it may, we know that ptosis often is present without any stasis and that stasis is present without ptosis. We are also aware that many gastric and intestinal symptoms ascribed to ptosis, are, instead, symptoms resulting from stasis and disappear when the latter is cured.

There is one thing in this connection that we desire to impress upon the mind of the reader, and that is, that stasis does not necessarily mean constipation. We have seen several severe cases of stasis, and, consequently, autointoxication, in which there was no constipation. In one of these, there was a decided diarrhea. In other cases, constipation and diarrhea alternated.

Leslie says that, in intestinal stasis "the pelvic colon and the rectum may become greatly elongated (perhaps to twice its normal length), sagging along the floor of the true pelvis and capable of retaining the fecal matter for several days, even though a small section may be broken off and evacuated daily, thus giving rise to a false impression of normal bowel movements."

In our practice, acute autointoxication developed in a little girl of ten years. There was no sagging of the colon nor were there abnormal kinks, so far as we could discover, and, yet, shelled beans that were only partly cooked and badly masticated remained within the alimentary canal for ten days despite several brisk purgatives. Had this case not occurred in our own practice, we should have doubted the truthfulness of such a report. There is no doubt that fecal retention is not inconsistent with a daily

action of the bowel; also, that the infrequency of the stools gives no certain evidence as to the existence of intestinal stasis.

The *symptoms* occurring in autointoxication are as numerous and as varied as the sands of the sea. We can not now call to mind a disease in which the symptoms are so varied in different individuals as they occur in this condition.

In some acute cases, and especially is this true of children, there is a sharp rise of temperature to 105 or 105.5° F.; but, this generally is of short duration. In the majority of cases, there is no elevation of temperature and many cases run a subnormal course.

In very young children, the picture is one of extreme prostration: features drawn, extremities cold, eyes sunken, and fontanelle depressed. Muscular twitching and even convulsions may be present. The mental condition is dulled, the patient often lying in a state of stupor. As we have said before, there may be either diarrhea or persistent constipation. If an evacuation occurs, it usually is very offensive, green in color, and often contains quantities of mucus.

Among adults, we seldom encounter acute cases, yet, every general practitioner meets with them now and then. There is marked headache, sharp pains are flying here and there, a peculiar light feeling about the head, and creeping chills and general malaise are complained of. The tongue is heavily furred with a white or brownish-white coat. The bowels are constipated, as a rule.

The majority of cases seen among adults are chronic in nature. The patient says he is not ill, yet, is not well. He is languid, has no ambition; headache and neuralgia are present nearly all the time; the back and limbs ache more or less day and night. Some patients complain of persistent pains between the shoulders, especially if they are lying down or sitting in one position. In some women, this pain under and between the shoulders and in the region of the short ribs is very trying and persistent; in others, the back, hips, and limbs are the special sites for the pains and aches.

Indigestion invariably is present, in some form or degree, in some cases of autointoxication. In others, the digestion seemingly is normal, but, the subjects can not gain any strength, although they may be eating

an abundance. Here we have faulty assimilation. Then, again, there is derangement of the body-chemistry. In many patients suffering from this disease, the liver becomes very torpid, their color is hard to describe, in fact, some of them have jaundice in full development.

Thus we could go on and on enumerating symptoms and conditions that are complained of in this disease known as auto-intoxication or autoinfection, but, we believe we have named sufficient so that the reader may recognize the true condition when he is called upon to make a diagnosis.

The treatment is both prophylactic and curative. The curative treatment is medicinal and surgical. As to the prophylaxis, it is much easier to prevent this condition than to cure it after it has been acquired. Prevention should begin in childhood. Every child should be instructed in the habit of daily evacuating the bowels. The habit once thoroughly formed, is not lightly to be neglected. They should also be told that a constipated movement day after day does not mean a healthy condition of the whole alimentary canal and will lead to trouble if not corrected.

Often, the proper selection of food will overcome this condition and prevent auto-intoxication. In adults, when constipation has become a fixed condition, there always takes place more or less absorption of toxic material. The patient is in a chronic state of autotoxemia, consequently, a bad state of health obtains. This condition being present, it only is necessary for an extra amount of toxins to enter the blood stream, when a typical case of auto-intoxication confronts us.

To begin the medicinal treatment in this class of cases, we know of no remedy more efficacious than the combination of calomel, podophyllin, and bilein, repeated often, until several movements have been secured, followed the next morning by full doses of a laxative saline or of magnesium sulphate. This should be repeated every morning for some time, but, in reduced dosage.

Bilein should be given three times per day and a granule of podophyllin and aloin at bedtime. When the physician has satisfied himself that the bowel has been freed of all offending accumulations, he is ready to begin treatment that will build up the patient's general rundown condition. If the habits are faulty, try to correct them. Change of employment often works won-

ders for patients that live sedentary lives. Look after all the eliminative functions. In the case of some patients, it seems almost impossible to prevent them from relapsing into the constipated state. Should you have on hand a case of this kind, you will find the following very serviceable: prescribe a good brand of mineral oil, 16 ounces, fluid extract of cascara, 2 to 3 ounces. One teaspoonful to a tablespoonful every night on retiring. Instruct the patient to take just enough of this to produce mushy stools. We have recently treated a patient in whom half a teaspoonful was all that was required. Patients that naturally suffer from a torpid liver will be greatly benefited by bilein taken three times daily. Also, do not forget the Bulgarian lactic-acid bacillus in auto-intoxication, for the purpose of rendering the canal as aseptic as possible.

Patients that drift back into constipation must, from time to time, be given a thorough cleaning out, for, if not, the disease will follow sooner or later. Patients having large or pendulous abdomens must be fitted with proper supports. Displaced viscera must be replaced by means of mechanical or surgical measures. Loops, kinks, sacculated conditions, abnormal growths, and kindred abnormalities must be corrected by means of surgical measures whenever practicable.

Even with all these methods, we find a patient now and then that will not follow out instructions for a sufficient time absolutely to correct chronic constipation, and, so long as this is present, there always is grave danger of auto-intoxication developing.

Nothing benefits this class of patients more than a thorough change of environment, occupation, and manner of living. Something to do that will get them out of the old ruts that they have been in so long; something that will clear their mental horizon and give them something useful to do. A few years ago, we had a patient that was a chronic sufferer from constipation, and, consequently, from auto-intoxication. He was always full of aches and pains, and was a chronic grumbler, as well; was actually a misery to himself and family; never had a good word for anyone. This man had spent forty-two years in his little store and for fifteen years he seldom left the shadows of his home and store. He always felt too bad to visit or to go to

church. Physicians had given him enough medicine to pickle him.

When we came into the case, it was very difficult to move the man's bowels with drugs—all the usual kinds had lost their effect except in heroic doses. We began to talk change, radical changes in his business and way of living. At first, he strenuously objected, but, we remained firm and offered advice. The store was turned over to his son, the old man went on the road for one branch of it—late in life, it is true, but, we wish you could see the improvement in his condition. The wife and children say he is a new man, out and out; a man with new viewpoints, broader ideas, and no longer a chronic grumbler. He no longer suffers from constipation and that long train of symptoms that follow in its wake.

We have seen many people cured of this condition by spending a few months at some springs. Most people believe that the water is responsible for this happy change, but, this is true only in part. The drinking of quantities of water is beneficial anywhere, but, the change of food and the manner in which it is cooked, the change of climate and scenery all have their beneficial influence; while, added to these, there getting away from one's self, living a broader life. All this contributes to the cure.

C. W. CANAN.

Orkney Springs, Va.

THE DRIFT TOWARD NATURE-CURING

It is asserted that about twenty million people in the United States practice drugless methods of healing. That is about one-fifth of our entire population, or one-third of the adults. A few years ago, only about one-sixth were adherents of these new doctrines. Further back, one-seventh, then, one-eighth, and so on. In the days of my young manhood, when I began studying medicine some fifty years ago, only an occasional "faithhealer" was heard of. If this drift toward medical nihilism continues a little longer, we shall become a drugless nation. In Boston, the home of Christian Science, it is said that druggists as well as doctors are fast being put out of business.

I mention these facts simply as indices enabling us to make a more correct diag-

nosis of the situation. Whether it suits us or not, wisdom demands that we adjust ourselves to these rapidly changing conditions. Unquestionably, the great world cataclysm now in progress will accelerate these changes.

In order that we may realize that this swing of the pendulum of civilization is not confined to the medical profession alone, it may be well to refer briefly to two other leading realms of human endeavor, namely, philosophy and religion.

"Philosophy is completely unified knowledge, while science is partly unified knowledge." This definition we have from that past master of the evolutionary philosophy, Herbert Spencer. The revolutionary effect of the synthetic philosophy of this "world's first great systematic thinker" is known to all well-read students of the science of humanity.

Applying this law to the solution of the problem before us, we find such facts as the following rapidly appearing in evidence. Back of and penetrating through all nature, there exists infinite intelligence, or mind. Indeed, we all live, move, have our being in, and are a part of a thinking universe. Everything is a manifestation of this cosmo-sentient energy. The human entity ceaselessly receives this energy in the air, the ether, the water, the light, the food, and in other ways. It is for us to transmute this elemental life into healthy tissue, blood, bone, and muscle. It is for our wisdom to build it also into our mental machinery and to evolve sequentially a congeries of faculties constituting a microcosm, indeed, one that shall be perfectly correlated to the macrocosm—the greater world without.

It is self-evident that mind must exist in nature, else it could not become manifest in man. Something never comes from nothing. The lack or the imperfect adjustment either of body or of mind at any stage of our physical or mental evolution is certain to result in disease. Perfect adjustment must, logically, result in perfect health.

This supreme subconscious mind of nature without, constituting the microcosm, is the perfection of health as well as of wisdom, will, and love. It is the ruler in its own domain. All disease, then, of the body or the mind is abnormal and is due to our limitation of knowledge. It results in the mind having lost partial or complete control of some of its bodily

functions. Philosophy says that the tendency of all nature is toward perfection both of function and of manifestation of function in form. Mental and physical efficiency is normal. Inefficiency is abnormal and wrong.

The human body is a machine which the man within must learn how to manage. It is a laboratory designed to manufacture and to distribute properly all the serums and secretions it requires for perfect functioning. It can meet and master any emergency when given a chance. When man comes into the consciousness of this great truth and acts upon it, he will maintain both mental and physical efficiency. Among a rapidly increasing number of organizations, this philosophy is coming to the fore at the present time. Ernst Haeckel called it spiritualistic monism. The name matters not. It is, evidently, man's response to Kant's call of "back to nature."

The drift toward religious and ethical reconstruction is equally significant. Limited space will permit of only a few sentences on this subject—just enough to help settle the diagnosis.

Of all the European nations engaged in this unparalleled world conflict—Turkey alone excepted—about 79 percent are professed Christians in the Protestant, Greek, and Roman Catholic dominations. These professed followers of Him who came to bring "peace on earth and good-will to men" have had complete control of the education of the millions that have been slaughtering each other for now from fourteen to sixteen hundred years. They are, therefore, logically, primarily responsible for this reversion to barbarism. I used to say they have made monkeys out of millions, but, that would be slandering the monkeys. Monkeys have more sense than to treat each other in that way. It is said of these poor creatures that in their last international convention they were unable to find a language with which to condemn those humans engaged in killing and maiming each other.

Seriously, when such ecclesiastical facts as alluded to shall become more widely known, a better religious and ethical adjustment is sure to follow. It looks now as though the trend toward a religious type of pantheism, manifesting itself in the establishment of the brotherhood of man and nations, were rapidly setting in. In the last analysis, Christian Science, the

great New Thought cult, Theosophy, Spiritualism, Socialism, and several other similar movements are energized ethically by the concept of one universal mind, of which everything and everybody is an individualized manifestation. Religiously, surely, the most-advanced people everywhere will respond to the mighty cosmic urge felt by all for a gospel that will override all old barriers and bring forth a system of ethics that will forever remove the causes that naturally produce these soul-sickening cataclysms.

In this country, our trend toward religious reconstruction is most noticeable. Only about one-third of our population is found in the churches and membership is barely keeping pace with the increase of our population. A generation ago, church membership was increasing from two to three times as fast as our population. Our institutions being more plastic than they are in Europe, our readjustments will be less cataclysmic than they are there.

However, little need be said directly and concretely concerning medical evolution to make our diagnosis complete. The dictum of Immanuel Kant, who shook the world with his philosophy in the eighteenth century, as Herbert Spencer did in the nineteenth, was, "Back to nature." He might as well have said, "Forward to nature"; for, we must remember the celebrated definition of "nature" given by John Stuart Mill. "Nature," he says, "means the sum of all, together with the causes which produce them; including, not only all that happens, but, all that is capable of happening, the aggregate of the powers and properties of all things." With this, the greatest philosophers all agree. Remember, also, that nature is stronger than nurture.

How swift has been the evolution from the bleeding-, purging-, blistering-, sweating-, and puking-practices of our fathers to the fine and highly complicated ethical system of the present. My large pocket-case of alkaloidal granules is little less than a complete drug-outfit for all emergencies. Surely, it is the limit so far as drugs are concerned. Let us not deceive ourselves, though, with the thought that medical evolution ceases with these minute "arms of precision." Forward is the watchword; ever forward, "from the homogeneous to the heterogeneous," as Mr. Spencer has it. That means, of course, the knowledge of the use of nature's finer forces, just what

we are beholding in those new movements to which I have alluded.

In medical nihilism and preventive measures (for, all negations are but stepping-stones to affirmations), Dr. Wm. Osler seems to be in the lead in the profession proper. He says, "The new school does not feel itself under obligations to give any medicine whatever." Many others from all the medical schools might be quoted in substantiation of this statement. Yale, Harvard, Johns Hopkins, besides several other medical colleges, have chairs of suggestive therapeutics or applied psychology. The Weltmer school of suggestotherapy has grown in nineteen years to enormous proportions. It has treated one million patients with success in all but three percent of its cases. The Supreme Court of the United States, in 1902, in deciding in favor of that cult's drugless methods, pronounced them "sound and practical . . . legitimate and lawful." From Osteopathy, Christian Science, The Unity School, and other naturalistic cults, similar testimony might be produced, if space permitted.

In philosophy, it is Monism, instead of Dualism, that has no place for miracles or the supernaturals. In religion and ethics, it is divine Immanence and a God of love, instead of anthropomorphism and an eternal hell. In medicine, it is psychotherapy, instead of drugs, in which, no matter by what one of the dozen or more names it may be called, the healer is only the agent or transmuter of the healing energy. In economics, it might have been shown that the trend to naturalism is equally manifest in the rapid rise of the social democracy in place of capitalistic monopoly the world over. The Kaiser of Germany admitted he brought on the great war in order to check the growth of Socialism. This is known to all unprejudiced students of current history. If we are wise, then we shall adjust ourselves to the cosmical trend of these great evolutionary forces. Together, they evidently constitute the voice of God speaking to us in trumpet-tones.

S. J. BROWNSON.

Ft. Worth, Tex.

WHAT DO YOU REALLY KNOW ABOUT HEALING THE SICK?

A physician may have spent four years in a medical college; he may have received

the degree of Doctor of Medicine; he may be a legalized practitioner of medicine; he may be a member of one or more medical societies, a professor in some medical college, but, what does he really know about healing the sick? When a doctor is graduated from a medical college, he is "supposed" to know the cause, symptoms, and treatment of several hundred diseases; but, how many can he actually cure?

The professors in our medical colleges have a fearful responsibility on their shoulders; for, it is their business and it should be a matter of duty with them to see to it that the young men and women that yearly are sent out from the medical colleges in large numbers are prepared to treat successfully the diseases prevalent in our country. Of what real value are all the courses of instruction, if they fail to teach the students a definite treatment for the diseases that are more or less common to our country?

A stream is no higher than its fountain-head; if a professor in a medical college is himself unable to treat successfully the diseases prevalent in our country, it is obvious that he will be unable to impart healing-skill to his students.

A physician's reputation is based, or should be based, solely upon the cures that he effects. His usefulness in any community depends upon his ability to heal the sick. I know, from an extensive experience and observation, that the average physician in this country is weak on *materia medica*; he has only a superficial knowledge of the subject. Some of our medical colleges have cut out *materia medica* from their curricula. Thus it is that our young men and women are being sent out into the world to practice medicine without possessing a knowledge of the definite curative action of drugs; they are handicapped in their treatment of the sick, for the simple reason that they have not been taught a definite treatment for the diseases they are certain to meet in everyday practice. Is it any wonder, then, that, with this kind of teaching, so many of our doctors become disgusted with the practice of medicine and finally become medical nihilists or drugless healers?

The medical colleges that fail to teach definite medication to their students, as well as those medical colleges that declare there is no such thing as a definite medication for diseases, by eliminating the chair of thera-

peutics, are largely to blame for this condition of things.

It is the custom of the merchant every year to take an account of stock, to determine its quantity and value and thereby his yearly profit or loss. It would be a good thing, likewise, for our doctors to take an inventory of stock to find out how much they really know about healing the sick.

Now suppose that an epidemic of pneumonia, typhoid fever, infantile paralysis, cerebrospinal meningitis or grip should sweep over this country, are you prepared to treat each of these diseases successfully? If not, then it is your duty, as a physician, to fit yourself to treat the diseases named successfully, or else you have failed in your duty to suffering humanity. You can not plead the excuse that you do not know how to treat such cases successfully or that you were not taught how to treat them in the medical college from which you graduated. There are textbooks that will tell you how to treat such diseases successfully, and it is your business, as a physician, to study them and be prepared to meet these diseases, as well as others—and cure them.

Suppose you were suddenly called to a case of tetanus, hydrophobia, blood-poisoning, gallstone colic, uremic or puerperal convulsions, would you know how to treat and cure such cases? You know our country is being taught the lesson of "preparedness." So, likewise, it is up to us medical men to learn our lesson of preparedness and develop the necessary skill to cure the diseased conditions that may arise in everyday practice. There are many other diseases that may be met with at any time, and a good physician should be prepared to treat all such cases successfully.

In this article I purpose to present diseased conditions to the reader as they may be met with in everyday practice. If a doctor is able to treat these conditions successfully, it is a pretty severe test of what he really knows about healing the sick. When a doctor knows his *materia medica* thoroughly, he will know definitely what to do for a sick person. It enables him to prescribe for the sick rapidly, intelligently, and successfully.

Theories may change, fads may come and go, but, the true, the definite indications of a remedy never change. They are the same yesterday, today, and forever.

We prescribe a remedy because it is the remedy indicated in that particular case.

We expect results, and we get them. That does away with all guesswork and uncertainty; it reduces the business of prescribing for the sick down to an exact science; and *that is* what we mean by "*definite medication.*"

You may be called to see a sick baby. The mother may say to you: "Doctor, this little boy won't give me any peace; he cries all the time. The only way I can keep him quiet is, to carry him; the moment I put him on the bed, he starts to cry." There is one remedy indicated, which, if administered, will quiet that child, and give the mother rest. Do you know what it is? Don't give the little baby any "dope," but, give it the indicated remedy.

A woman may tell you that she flows too much at the monthly period; that as soon as she gets up in the morning, she starts to flow. The blood is dark, tarry, passing in clots. Upon examination, we find inflammation of the *os uteri*, a thickening of the cervical canal, which is as hard as cartilage, with retroversion. She has a yellowish, fetid leukorrhea between the periods. We call it chronic metritis. The condition indicates one remedy, and that will cure her. Do you know that remedy?

Men at or past the middle age sometimes are troubled with chronic enlargement of the prostate. Many physicians send such patients away to the surgeon, to be operated on. The above condition indicates one remedy. If you knew that remedy, and used it wisely, you would have many such cases to treat.

One of the most common diseases we find is, spinal irritation (spinal hyperemia), but, the average doctor can not diagnose it nor treat it successfully when he sees it. A cure of one such case will often make a doctor's reputation in his community. Do you know how to treat such cases? Very likely not, for, you were not taught in the medical college you attended how to cure spinal irritation.

The most common condition met with in everyday practice is, indigestion, and the symptoms will be as follows: An hour or two after eating, the patient will have a sour taste, pressure in the stomach, bloating; he feels as if his clothes were too tight; wants to loosen his clothes. This is an American disease and every doctor should know how to cure it. The above group of symptoms point like a fingerpost to one remedy, and the doctor who *knows*

his *materia medica* will readily recall the remedy.

Intercostal neuralgia is another very common disease, but, very few physicians know how to cure it. You will meet such patients that have been the rounds of the doctors, and they may come to you, hoping that you will be able to cure them. The condition indicates one remedy, and that remedy will cure the patient so quickly that it will please you. Can you name this curative remedy?

You may have a case where the anus is cracked and fissured; piles protrude, bleed, and are very sore. The patient walks the floor in agony of pain for an hour or two after each stool, even after a soft stool. This is one of the very cases where a doctor needs just the right remedy to cure and thereby gain the confidence of the sick person. This condition points directly to one remedy, and you, doubtless, know that remedy?

You may have under treatment a case of chronic diarrhea in an old lady. She feels a desire for stool in the morning as soon as she gets up and moves around. The passage is sudden, urgent, gushing, painless, with much flatus, and of a brown color. You will like to cure such cases when you meet them, and your patient will appreciate the cure. This condition calls for one remedy, and that remedy will cure. Can you give the name of this remedy?

Ferrum is often prescribed in anemia when it is not indicated, and, as a result, your patient does not improve. When ferrum is indicated, you will know it by reading the face, tongue and pulse of the anemic patient. The face, tongue, and pulse tell you definitely when ferrum is indicated and when it will cure your patient. Do you know the definite indications for the remedy ferrum?

In reading the pulse of a patient, you may find quickness of the pulse, without strength. The patient complains of weakness more than any other symptom. It indicates one remedy—do you know what it is?

In reading the pulse of a person at or past the middle age, we may find it weak, with a marked interval between the pulsations. This peculiar character of the pulse warns us that paralysis has already taken place some time previously or is about to take place, and it points to one remedy. Do you know what it is? The knowledge may

be the means of prolonging the life of someone near and dear to you.

Women at the menopause may have hot flashes, weakness, and perspiration. This condition calls for one remedy, and that remedy will help them from the start, for, it is the remedy indicated. Such cases are so common that every physician should know how to cure them.

A large majority of cases of displacement of the uterus are caused by enlargement of that organ; the uterus sags down from its own weight. There is one remedy that will reduce the enlargement of the uterus and help you cure your patient. You should know what that remedy is.

An old lady may consult you about a delicate condition. She will tell you that every time she coughs, sneezes or laughs the urine passes involuntarily. This indicates one remedy, and when you cure such a case your patient will appreciate your skill.

It is success in curing the little things, the simple ailments of your families that helps to make you solid in any community. Every cure you make binds the people more closely to you.

You may be called to a case where a man has had a fall or injured his head in some way. The patient suffers from mental trouble since his injury. This indicates one remedy. Can you name it?

You may have under care a case of anemia, where the pulse is rapid and intermittent. The patient eats well, but, is losing flesh.. This kind of pulse, with the other conditions, calls for one remedy. If this is administered, your patient will get better from the start.

When you see a patient with bloating of the upper eyelids and also, the swelling of the ankles; the patient has to get up in the night to urinate. This means kidney trouble, and it points unerringly to one remedy.

The above are just a few cases, taken at random, that are liable to occur in any physician's practice, and it embodies a fairly stiff "quizz" to find out what he really knows about healing the sick.

To be a physician, is, to *know the materia medica*; not the *materia medica* of one school of medicine, but of all. When we know the whole *materia medica*, we have an infinite resource to draw from in our battle with disease. Over twenty-five years ago, I realized what our medical colleges were *not doing* for their students, and that our doctors should be taught, first of

all, the *definite indications for remedies*; also a definite treatment for the diseases they meet in everyday practice. It was then that I began to teach physicians, and I have continued in such work ever since that time. I have never tried to convert a doctor to any system of therapeutics. All I did was, to try to help him become a better physician, to help him do more for the sick than he had been doing. My book, "Definite Medication," was given to the profession in 1910, to serve as a guide in the definite treatment of the sick. It is now used as a daily reference work by doctors in every state of the Union and in thirty-five foreign countries.

What I have written is a heart to heart talk with my readers, based upon an experience of almost half a century in the practice of medicine. It is an honest opinion of one who loves his profession, one who loves his fellow man; from one so broadminded and bighearted that he can recognize all physicians as brothers and extend to them the right hand of fellowship.

ELI G. JONES.

Buffalo, N. Y.

PREVENTING LOSS OF COVER-GLASSES AND SLIDES

My method of cleaning cover-glasses and slides is quick and requires no heat, thus saving almost all of them—quite a consideration now, when they are so expensive. I use a new glass staining dish with cover and which has places for slides. Fill it three-fourths full with denatured alcohol. Then you can place about 10 slides, on their ends, in this dish. Let them remain about an hour, covers and all, just as they have been taken from the microscope. Drain the excess of alcohol back into the dish. Rub your dry fingers on a cake of wet hand sapolio and smear the soap well over the slide or cover-glass. Then wash off clean in warm running water and dry with a coarse towel. The denatured alcohol can be kept in the staining-dish, thus being ready for use at any time. No scratches are left on the glass after cleaning.

ALDUS A. HOOPMAN.

Seattle, Wash.

SOME POINTED PARAGRAPHS

A plea to citizens to be thoughtful in the calls made upon their physicians in

these days of stress has been made by the East Side Physicians' Association, says *The Detroit Medical Journal* for June. Their statement is as follows:

"Many physicians are being called to war. The additional work is being done by those that stay at home. The cost of practicing medicine has been doubled; but, for patriotic reasons, your physician has not raised his price. You can help him do 'his bit' and benefit yourself by complying with the following suggestions:

"1. Put in your call early in the morning. (You will receive more prompt attention and the doctor can save time enough to care for several more sick patients.) (2) Do not call your physician in the evening or at night, except for emergencies. (A day-call will cost you less, get you well sooner, while your doctor can not give you his best skill unless he has had a good night's sleep.) (3) Do not ask your doctor to 'come at once', unless it is really an emergency. (Someone else may be in real need of his immediate attention.) (4) Pay cash, if possible. If you must ask for credit, do not expect long credit. (You get your pay promptly. Why shouldn't your physician? He can not get the long credit extended to him that you ask. Remember that the prompt-pay-patient gets the efficient service.)

I want to say a good word for the nursing sisters at the casualty clearing stations. We call them sisters over there. That does not mean that they belong to any special order. It simply means they are trained nurses, and, whether they come from London or Edinburgh, Chicago, New York, New Orleans, St. Louis, or Memphis, they are sisters, and they are giving the most splendid service that anyone could imagine. As I have tried to express it in some of my lectures, if they are not the salt of the earth, there is no such thing I have seen them caring for the wounded at Lemnos; I have seen them doing the same thing in Egypt and in France; I have seen them rendering heroic service from a casualty clearing-station to the discharge depot, and there is no tribute I can lay at their feet other than to tell you of the splendid service rendered to the soldiers. And their governments will, surely, not forget them in the day of peace. I have seen them in the cold, when

they had to dress in the cold, go to bed in the cold, and no fire, not a bit of it, for weeks together in that chill northern France. You now know what I mean when I speak of the nurses working in the cold. They never complain. They stick to their work, giving their very best efforts.—(Major W. J. Bell, in *Jour. Tenn. State Med. Asso.*, June, 1918.)

The number of deaths among the soldiers in the camps and cantonments in the United States in the last six months is less than it was among the people of the same age in civilian life—5,000 deaths in round numbers, in our camps and cantonments; which makes an annual death rate of 10 per thousand, while in civilian life the deaths for the same ages—from 21 to 31 years—have been, during the same time—12 per thousand. But, we are not satisfied with this. If possible, we are going to reduce the death rate still more.

I hold, and I think all will agree with me, that this surpasses anything that has ever been done in the history of war. No troops can be assembled, especially when they come raw and green from their homes, without a great deal of sickness and a more or less exaggerated death rate. Of course, you understand that the death rate among the soldiers—more or less selected men, as they are—should be a little less than among the same age in the civil population.—(Lieut.-Col. Victor C. Vaughan, in *Jour. Tenn. State Med. Asso.*, June, 1918.)

Women physicians, to the number of 1,875, have volunteered for military service, if needed, and a few have been accepted. The Council of National Defense states that more than one-third of all women physicians have formally listed themselves.

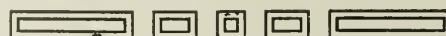
The Rev. James M. Gillis, of the Paulist order, speaking in New York, gives this definition of a pacifist:

"Jesus Christ is the Prince of Peace; but, Pontius Pilate was the Prince of Pacifists. He washed his hands, as they do, of the right and wrong of the whole matter. But, while washing his hands with water, he was drenching his soul with blood." And, again, "If my neighbor calls 'Help! Murder!' in the night, and I bury my head in the bed-clothes and pretend I hear nothing, I'm a pacifist. And, incidentally, I'm a liar and sneaking coward."

We learn that Walter B. Swift, A. B., S. B., M. D., of Boston, has just been appointed Consultant for Speech Defects to the Division of Medical Inspection of the Public Schools of Cleveland, Ohio. He is engaged in installing methods in speech correction by directing some 15 teachers to conduct speech correction classes. These teachers he trained up last summer to do this work.

This is highly important work, and we congratulate Doctor Swift on this recognition of his long continued researches.

The individual that takes advantage of conditions existing now and attempts to profit out of the war is an alien enemy, should be treated as such, and should be shot at sunrise. The man that attempts to profit out of soldiers' clothing; the man that attempts to get a corner on food; the man that seeks, in any way, to make undue profit out of any business with the government is a traitor to his country and should be treated as such.—(Lieut.-Col. Victor C. Vaughan, in *Jour. Tenn. State Med. Asso.*, June, 1918.)



After the World War

LETTERS FROM FRANCE—VII*

The emplacement of the last big Bertha gun, installed to fire upon Paris, has been found in the Corbie Wood, in the vicinity of Beaumont and Cugny; and the emplacement was just as had been indicated on photographs taken by aviators, the gun, of course having been removed.

This post, situated on the western edge of the wood, consisted of two parts; the emplacement for the real gun and another one for a dummy cannon. The two are identical, each having a three-compartment pit twelve meters long and two meters deep. The gun revolved on a circular platform. Curiously enough, the dummy gun was camouflaged, while the other was not. The Bertha was connected with a normal-gauge railway-line and between the rails of this track was a narrower one for the shell-trucks. Close by were shelters for the gun-crew, formed of tree-trunks and covered with a layer of earth and concealed with branches.

The Bertha that really did the firing appears not to have been touched by shells from aircraft, some, though, had fallen upon the camouflaged emplacement. The distance from this gun-emplacement to Paris, where shells fell once every half hour is 69 miles.

At the Folies Marigny the "Follies of 1918," an American production will have its European première. American songs, American music, American comedians, American chorus-girls are all on the program and Mr. Edward B. Perkins, the American producer of the "Follies," promises to present the nearest thing to Broadway that Paris has ever had in this direction.

The Follies of 1918 is an American show for Americans, while the Folies Marigny, one of the most attractive theaters in Paris, has been Americanized throughout.

The tipping-system of the French theaters has been abolished and, although unable to do away with the selling of programs, because of an existing contract, they at least were able to keep the tickets out of the hands of speculators.

The "Follies" has the real Broadway atmosphere. From the Winter Garden, comes Billy Howard, the comedian, with his lively American fun; also Johnnie Fields, the black-face comedian, who was with the Ziegfeld Follies. The show opens at 8:15 p. m. Two box-offices, one for American patrons and the other for French, are open during the day. Seats are selling four weeks in advance. To prevent excessive charges, the after-theater taxicab-service will be under the supervision of the Folies Marigny management.

With the opening of the American offensive in the St. Mihiel sector, the machinery of the American Red Cross was immediately put in motion. With each division engaged, was an organization equipped to render aid to the soldiers going into the fight and to meet those, that would come back to the dressing-stations and field hospitals, with hot drinks, cigarettes, and other comforts.

The men composing these division field organizations have not stopped work since the bombardment all along the front began at 1 o'clock on Thursday morning. Their rolling kitchens have followed closely the rapid advance of the Americans. In some cases, field hospitals were on the move forward by Thursday noon, accompanied by the American Red Cross outpost service, whose supplies were hastily loaded on trucks with kitchen-trailers coupled up and were steaming along the roads of the advance. From there, came to the American Red Cross warehouses in the advance zone rush orders for supplies to the forward points; sometimes they were accompanied by brief penciled reports mentioning such incidents as the serving at a certain point of a hundred gallons of

*It is to be kept in mind that this letter was written before the armistice was signed, and while active fighting was going on.—Ed

hot chocolate between daylight and 9 o'clock in the evening. At another place, 120 gallons of hot chocolate and 6 big sacks of bread were served to the men that had reached their objectives hours ahead of the schedule and were feeling the pangs of hunger after their victorious ten hours of fighting.

At the evacuation loading-platforms, newly established canteens carried on the work for the wounded that had been begun at the dressing stations. Thermos containers of hot drinks were sent up to the front by the ambulances bringing in the wounded. For two weeks or more before the attack began, enormous quantities of beds, blankets, pajamas, bathrobes, as also medical supplies had been delivered by the American Red Cross warehouses and hospitals. To regulate the distribution of these supplies, the army medical service virtually took over all the American Red Cross resources for the time being and determined where they were most needed. At one point a 1,200-bed hospital was completely installed in two days, as a measure of extra precaution. The call from the army for this installation came at 11 o'clock one day last week and at 11:10 o'clock ten camions were being loaded with the necessary equipment.

By a system of day- and night-visiting of field and base hospitals, emergency needs could be learned about and quickly met. As the battle progresses, the American Red Cross organization is reporting that its posts will be 10 or 12 kilometers from the points where they were established just before the opening of the offensive.

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The American women physicians that have come to France with the "Women's Overseas Hospitals" under the National American Women's Suffrage Association are making a name for themselves in France and, indeed, for American women in general.

The first commissions that the French Government has issued to American women physicians have been given to three surgeons of the Women's Overseas Hospitals. Dr. Caroline Finley, Dr. Lee Edward, and Dr. Anna Sholly, who have been engaged in work in a French hospital at the Chateau d'Ognon, near Senlis, since last April, have been made first lieuten-

ants in the French army, and this on the heels of their receiving the croix de guerre last week. One of the nurses of the same unit* has accomplished excellent work, the repeated citations of this unit showing that its members have been brave and courageous while performing their duties under fire. While working in a French hospital, the members have been able to do a great deal for our own men, as many American wounded were received at the chateau during the summer.

The first unit of the Women's Overseas Hospitals arrived in France last March and was immediately put into action by the French Service de Santé. A second unit is doing refuge work near Bordeaux, while the third unit has recently arrived in France and has been assigned to work in a French hospital for gassed patients, near the front. While waiting to be sent to this hospital, the members of the unit are being instructed in the care of the gassed patients in Paris. They have been visiting the various gas-hospitals during the past few days and expect to receive further instruction next week.

Military Unit No. 1 is under the direction of Dr. Caroline Finley; No. 2, at Labouheyre, is under the direction of Dr. Marie Formad, while Dr. Marie L. Lefort is the director of No. 3, for the treatment of gas-cases.

The Women's Overseas Hospitals had made a splendid drive for funds in America, and, according to the amount raised, backed by the talent of these women physicians, who have been so readily recognized by the French government, the organization is prepared to accomplish further good work in France. Mrs. Charles L. Tiffany is the chairman of the committee in America and Mrs. Raymond Brown is the general director in France.

While these women are the first American women surgeons to receive commissions in the French army, the work of other American women has been recognized by the Government in a similar manner. Last winter, Miss Katherine Baer, of New Jersey, an assistant in a hospital near the front, was made a corporal in the 137th Regiment of Infantry. Miss Baker had cared for the wounded of this regiment. As this regiment had been decorated with the croix de guerre, Miss

*Miss McKeen also received the croix de guerre.

Baker now wears the cord over the left shoulder, this signifying the fourragère of the croix de guerre. There is still another American woman, whose name is not known, who has been attached to the French army.

As already has been announced, the Y. M. C. A. has rented the Palais de Glace, on the Champs-Elysées, for boxing and other entertainments, and one night each week will be given over to the glove-artists. It is proposed to put on a program next week, probably Wednesday night. The committee appointed to handle this sport is an excellent one, including men who have had experience in promoting this amateur game. F. W. Stone, of the Y. M. C. A., has been appointed matchmaker, and he will lend to the enterprise the experience gained with the Chicago A. A. and elsewhere.

All of the talent for the shows will be provided by members of the A. E. F. The committee's idea is, to develop many good amateurs, rather than to exploit a few professional stars. Large gloves will be used and the bouts will be short, so that the greatest possible number of men may have a chance to show their skill. A good "windup" card, involving men that have had professional experience, will be a feature of each program, if it can be arranged. Lieutenant Gargan is chairman of the boxing-committee.

About two weeks ago, General Pershing paid the American Library Association the unique compliment of granting it the franking-privilege, for its books, in the United States Army postoffice in France; thus placing the capsheaf on the service which the A. L. A. is building up for members of the A. E. F. Granting of this privilege means, that any member of the A. E. F. may now write direct to the Paris headquarters of the A. L. A., at 10 rue d'Elysée, for any book he wants. The book can be sent him and then returned, postage-free.

Heretofore, the work of the A. L. A. has been confined to placing collections of books with individual military units and in Red Cross hospitals, Salvation Army cabins, Y. M. C. A. huts, Y. W. C. A. hostess houses and Nurses' Clubs, Knights of Columbus centers, and all other places that

offer recreational opportunities to members of the A. E. F. All of these organizations have cooperated most heartily in this service, and about 300,000 books already have been distributed.

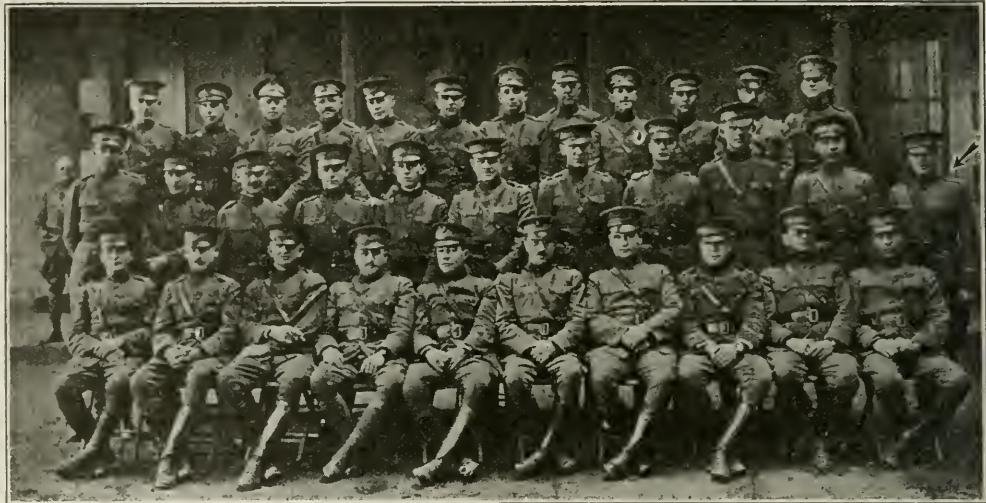
However, from the first inception of this work, the ideal of individual service has been in the mind of the European representative of the A. L. A., Mr. Burton E. Stevenson, and the granting of the franking-privilege renders this immediately possible. Details were at once worked out and a reserve collection was established at the Paris headquarters, from which these special requests can be filled. All books thus sent out may be retained one month, and the men are made to understand that the success of the entire service depends upon their playing the game and returning the books promptly; that the success of the whole undertaking lies in their own hands. Special mailing-cartons will soon be ready, so that this shipping can be done with a minimum of trouble.

Not one request in ten is for fiction. Virtually all of them are for textbooks, technical books, and books on serious subjects, either for the purpose of continuing studies begun at home and interrupted by the draft, or, for gaining a more perfect knowledge of military technic. "I should like to procure a first course in algebra," writes Private McAlpine, of Company B., of the _____ Regiment. And he gets it.

Writes Private Cohn, of Battery E., _____ artillery: "No gladder news could have been conveyed to me. The most sensational feature of your work is, your success in obtaining from our revered Commander-in-chief the privileges of our army postal service. I am not very fond of fiction, but, should give anything in the world for a copy of President Wilson's letters and addresses." A copy of the President's war-addresses was sent him.

"I am hungry for something to read and study," writes Private Lorimer, of the _____ Train. "I should like to read Carlyle's 'French Revolution' and Muensterberg's 'Psychology, General and Applied.' He got the Carlyle, but, the Muensterberg was beyond the present resources of the library.

"My favorite authors are Washington Irving, Oliver Goldsmith, and George Eliot," writes Corporal Carlin, of the _____ Division. "The greatest deprivation I have



Medical Officers at Base Hospital 101,
St. Nazaire, France. Captain Robert C. Murphy indicated by the arrow.

felt in my nine months of active service is the lack of books," writes Corporal Cort, of the Marines. And he asks for Thackeray's "Pendennis."

"I was engaged in the banking-business at home and wish to spend my evenings improving my knowledge along this line," writes Corporal Connolly, of Company 17, Motor Mechanic regiment. And so it goes, request after request.

Many men ask for books on mathematics, others for books on shorthand, still others for technical books of every description. It already is apparent that the shipping-quarters opened by the A. L. A. at 10 rue d'Elysée will be far too small, and plans are under way to enlarge them. It really is a great educational program that the A. L. A. has started, one which promises to be among the most important features of the A. L. A. work among our soldiers in France.

The U. S. Army Ambulance service Headquarters has been informed that a number of its men that were captured a few months ago have been reported by the Red Cross to be in German prison-camps. The following men are at the prison-camp in Cassel: Alfred P. Jones, of S. S. U. 524; H. V. Jordan, of S. S. U. 506; W. P. Merget, of S. S. U. 621, and E. E. Larson, of S. S. U. 524. A postcard has been

received, by friends, from Frederick G. Lockwood, of S. S. U. 621, who also is a prisoner in Germany and he writes that he is well and that six other American ambulance-drivers are captive in his camp. "We should be glad to have soap, canned goods, tobacco and chocolate," he writes. Mr. Lockwood's address is Compagnie s. p. Nr. 3264, Gefangenlager Langensalza, Via International R. C., Berne, Switzerland.

The reports from the various sections of the Ambulance Service all along the line are most interesting and show that the Ambulance drivers have been in the thick of the fights, and, while some of them have been taken prisoner or have had their cars shot to pieces, as a whole, they have come out with flying colors and are eager to be in the next attack.

Another section of the U. S. A. A. S. has been doing excellent work recently, according to its army citation. S. S. U. 633,—under the command of Lieut. Walter Ives and Lieutenant Fabre, of the French army, and the American Sergeants O'Brien and Rich—has been cited for its "heroic courage and extraordinary bravery in a certain battle while reaching the postes de secours and evacuating the wounded under heavy fire."

B. SHERWOOD-DUNN.
Paris, France.

Just Among Friends

A DEPARTMENT OF GOOD MEDICINE AND GOOD CHEER FOR THE WAYFARING DOCTOR

Conducted by GEORGE F. BUTLER, A. M., M. D.

[Continued from February issue, page 160]

CHARLOTTE BRONTE, in "Vilette," bravely alludes to the strange perversity of mind that leads us to regard with indifference or even with consummate pleasure an obloquy in quarters when we can expect no fair interpretation. We need not arrive at this degree of cynicism, yet, without question, the secret of one of the most living attractions of society is the thought that, whether we encounter in others dissent or approval, sympathy or hostility, we are to some extent measured by the standard of excellence we ourselves have established. We can not claim immunity from criticism and rebuke, yet, the grounds for their exercise must more or less coincide with the canons of taste and propriety.

But, what soul can know another? Throughout life, we peer into the darkness that veils from our imploring eyes the mystery of our own identity: how, then, may we presume to penetrate the motives and intuitions that contribute to form the character of our dearest friend? Still, as in friendship, in proportion to our capacity of reading readily the hidden constituents that mould the harmony of the assembly, and in ratio to our knowledge that the mask we habitually wear may be freely discarded in the absolute sincerity of the highest relations, will our love for society be enhanced.

The doctrine of affinities, so finely presented by Goethe, deals largely with the congeniality of souls. To a kindly nature and skilled perception, all human souls are congenial, for, there is none so meager in virtue and merit as not to claim some regard on the part of a reflective mind. But, there must be no dissembling if we would attain the rarest sympathies among men. "How mortifying is it," says Emerson, "in those from whom we expected a brave attitude to find only a mush of concession."

Should we stand courageously forth in the candor of our convictions and speak

the truths that are in us, our boasted society would, I fear, be speedily dismembered. I have known a young man of cultivated perception of beauty who, in conversation with a city belle, compared the eyes of one of the company to those of an Alderney heifer, and who forthwith was accused of inexcusable rusticity. The taste of the remark may be questioned, yet, had his companion read Homer or observed for herself, the compliment deemed worthy of divine Juno would not have horrified her.

We can not, in adopting our conversation and manners to others, be too zealous in preserving that individuality of thought and independence of expression without which the vital charm of society is lost in indiscriminate surrender of ourselves and thankless uniformity. Each snow crystal of the millions that fall is, in itself, an exquisite delicate type of the beautiful, as marvelous in symmetry and design as Tennyson's seashell—merged in the mass, they become shapeless and unlovely. But, if the desire to please has its proper limitations, dictated by fidelity to self, it is no less true that an unreasoning antagonism is subversive of the happiest intercourse.

There are members of society whose characters are best portrayed by the expression of Shakespeare, "I am nothing if not critical;" and, surely, there are few things more lamentable than the inimical tone, verging upon misanthropy, that confronts every advance we make, surrounding itself with a nimbus of unapproachable austerity. It is often the prerogative, if defect, of genius to assume a lofty contempt, as if to say, "Stand off from Jove!" but, in circles wherein the blight of mediocrity falls with unsparing justice, we can ill afford to assert a higher privilege than is the common fortune of mankind. Modesty in our declarations, deference to opinions at variance with our own, and an

equitable regard for the sensibilities of others, these are ornaments with which no dogmatism, however brilliant, can compare.

And here let me speak of conversation, the series of charmed links that weaves itself mysteriously around the community of thoughts and feelings expressed in society, but for whose friendly power we should walk this lonely world like shadows, girt with a silence more awful than that which aeronauts describe at the height of three miles above the earth, where, as Tissandier writes: "Not a bird is seen, not a sound is heard, not a vestige of the planet breaks the appalling monotony of the upper air." The French are justly considered masters of this most difficult performance, and the *art* of conversation, if its attainment may be regarded esthetically, is with them carried to great perfection, partly through the facility of a language remarkable for politeness and flexibility. I think few of us, even the most imaginative, would be impressed with the artistic element in the varied and spasmodic communications audible in an average smoking-car or country grocery, the purport of which leaves us strangely in doubt as to the wisdom of conferring the distinction of speech upon man. Yet, albeit we often are ready talkers than good conversationalists, there exist, in American society, in our growing culture, in our keenness of perception, our freedom of expression and genial sense of humor, the finest qualities requisite for well-bred, intelligent intercourse. It seems preposterous to speak when we have nothing to say; yet, this is the very demand of society; that we shall impart as well as receive pleasure, and nothing, I imagine, can ever make us regret the gift of speech so much as the bewildering task of striving to entertain for half an hour a human being to whose mind the propriety of vocal expression seems never to have occurred. Charles Lamb cites as an instance of English reticence a crazy toll-keeper shouting to a wayfarer, "How do you like your eggs, Sir?" to whom the stranger deigns no present reply, but, ten years after, passing the same spot, answers, "Boiled!" It has been my fate to address one or two individuals the possibility of whom answering, even after ten centuries, is remote.

"Speak from the heart" is the wise motto, but, in mixed company, this will never

do; and the current disparagement of natural ardor and the alarming increase of state lunatic-asylums warns us to converse from the head alone. Still, the old adage is true that, if we have aught in our inmost souls that sighs for utterance, the gods will bid us declaim, and wherever the oracle of sincerity and truth is spoken it will be heard. "Speech is silver, silence is golden"—true enough in rare moments, when feeling masters all expression, but, the maxim is offset by the scriptural text concluding, "when he holdeth his peace."

I have often observed in society the "Still waters" that "run deep." Certainly, there is a noble art of silence to be cultivated and admired, yet, we should remember that still waters often are stagnant, and a habitual reticence where stirring themes are in question, by no means argues wisdom.

Conversational power, however, appears to be rather a gift than an art. Talleyrand, Chesterfield, Coleridge, Macauley, Leigh, Hunt, and their peers were exceptional in this respect, and, probably, could our own Hawthorne have uttered what was passing in his marvelous mind, his store of fancy and insight would be seen to out-rival theirs. I am well aware that the subject is distasteful to our American ears. We can not understand that speech should be a matter of reflection and care. Our fluency in ordinary affairs, on 'change, in the caucus, and upon lines of travel injures our good taste in company and we associate with studied diction a degree of artificiality hardly in consonance with our somewhat ill-defined notions of freedom.

It is not quite thus. While rhetoric alone impairs the force of discussion and mars the spontaneity of good conversation the ability to convey our thoughts in precise and adequate language should always be a coveted attainment. Yet, study, in itself, seems but a factitious method for the acquirement of so estimable an art: there must be, underlying all interchange of thought, the genuineness of feeling and experience, and the best conversation will be marked neither by brilliancy nor learning nor wit, but, simply by suggestiveness: the stimulus of our highest faculties, which enables us to share the speaker's gift, so that to be a good listener is often the secret of the rarest social and intellectual enjoyment. "Consider not who said this or that," says Thomas a Kempis, "but, mark

what is spoken"—though the terms of the maxim may at times be inverted, without violence to truth.

I think that what often makes society dull and awkward is a lack of honest enthusiasm. The realistic tendencies of the day have a chilling effect upon the sincerity of natural emotion. Our parlors are awed by preraphaelitism. Poets we have foresworn: they are only poetasters: and, in place of frank, true-hearted sentiment we recognize only sentimentality, stigmatized by the vulgar epithets of "gush" and "slopping over."

What are we coming to? Is man, then, but a finished automaton, a miracle of organized forces, a curious mechanism composed of nerves and vascular tissues, lymph, bile and the like? Is the intellect, which Plato called the helm of the soul, only a brush of cerebral ganglia; the liver, as has been humorously suggested, quite as likely to be the seat of affections as is the heart; and are all the divine aspirations of the spirit crushed in the crucible of science? "Slopping over," indeed! All the good and great, all beauty and heroism have been "slopping over" since Prometheus breathed fire into the heart of man. Socrates, Mencius, and Buddha "slopped over," and Jesus of Nazareth, and Savonarola, and Luther, and St. Bernard, and Wesley, and Howard: yes, and, that mankind might witness the fulness of heroic devotion that runneth over in a country's cause, Leonidas, Tell, Burke, Washington, Mazzini, John Brown, and Lincoln all "slopped over," and a host of glorious women, from Cornelia to Barbara Fritzsche. Is the heart a thing to be ashamed of? Is the voice of earth's music to be hushed forever simply because it melts us to tears?

But for a blessed world of "gush" in bygone decades, who of us would now be present to consider these themes? Soon you will hear from yonder wayside bough a sparrow's lay that seems to whisper to an ideal world and wakens in the dullest fancy some lingering vision of the beautiful, some haunting sense of loveliness perchance never realized till now: is not God's herald "slopping over" with innocent ecstasy? True, there is a certain weakness of intellect, a premature softening of the brain discernible here and there in current literature, but, there is more to be dreaded from passionless propriety than

from the excess of imagination; for, to the imaginative faculty, must ultimately be referred the source and motive of all high moral action, nay, the *primum mobile* of all, as the dialog in Goethe's masterpiece declares: Faust: "In the beginning was the Word." Mephistopheles: "Not so. In the beginning was the Deed." Faust: "Say, rather, in the beginning was the Thought."

A still greater hindrance to the natural benefits of society is, the absence of candor so often prevalent in mixed assemblies, in rural "sociables" as well as in the salons of fashionable life. It seems very easy to be true to ourselves and others, when we reflect how simple are the elements of human character even amid its complexity of thought and action. Yet, who that has emerged from the adolescence of worldly knowledge can but recall the emptiness, the vanity of many a "delightful party," which, by flattering our conceits, lured us into the comfortable belief that they were really the perfection of social happiness?

I would not deify the vapid, yet, innocent chat which forms so large an ingredient of general intercourse. Nay, let croaking age be silent: may we never be old enough to forget that even the flirtations, with all their maddening train of hopes and fears, were not so very wicked, but, served to keep alive the "warm love of the heart," which in youth's exultant morning outvalues science and philosophy in its ennobling and sustaining power.

But, there creeps through our assemblies a shrinking fear of men, as though they were endowed with supernatural influence and their opinions might one day injure irreparably the good name we would preserve. This foolish timidity taints our address, distorting the face of society and leading us to conceal that which we long to disclose. "Whoever is a natural follower of truth," says Burke, "keeps his eye steady upon his guide, indifferent whither he is led, provided she be the leader." Must we be extravagantly fond of artichokes and waffles simply because our partner in the dance professes to have such a weakness for them? Inexorable Mr. Punch! Here is one of his thrusts:

Scene, a London drawing-room. "Who is that superb lady yonder? Surely, it's the duchess!" "Why, no, Mr. Snodgrass,

it's only the wife of Pipkins, the new member from Leith. Don't you know he made a large fortune in snuff and capers?" "Aw, yes, really. I thought that hideous fright couldn't be her ladyship." But, it was the duchess, after all!

If even there be retribution for polite hypocrisy. I think those who have applauded indifferent performances in music will form a numerous company of the accused; yet, better silence than the bald heartlessness. "That's a beautiful song"—as though the composer himself were on trial—followed by the ominous stillness that bespeaks the general conscience. There are situations, no doubt, where wit alone can save us from disaster. It is related of Talleyrand that, being seated one evening between two ladies, one the most accomplished, the other the most beautiful woman of the day, the former put to him this terrible proposition: "Now, Mr. Talleyrand, if we were sailing upon a lake together and both of us should fall into the water, which would you save?" Instantly he named the court-beauty. "What!" said the lady of talent, "and you would allow me to drown?" "No, indeed, madam, you would know how to swim."

I have reserved to the second part of my theme only the space which perhaps signified its due proposition in our lives and thoughts. Yet, the history of solitude, written, as it is in letters of flame, claims from mankind a solemn and attentive ear. It is the history of the most impressive struggles, the most careworn hours of toil and pain that have molded the aspirations and illumined the conquests of the human race, and from its central fires has been kindled the faith that has reared the divinest symbol of mortal regeneration. "They are never alone that are accompanied with noble thoughts," says Philip Sydney.

How, then, shall we define solitude? The very sound of the word has an echoing loneliness unlike that of any other

word in our language. Is it not the retirement and meditation of the soul—the utter consecration of ourselves to Deity? Addison, in the "Spectator," says: "I believe most men have, at times, wished to be creators, possessed of the power of molding the world to their fancy; but, they would act more wisely to mold their own prepossessions and prejudices to the standard of the world." And, again: "The passive virtues only are fit to be buried in a cloister; the firm and active mind despairs to recede, and rises upon opposition." Elsewhere he writes: "In case we suppose ourselves translated into Jupiter or Saturn and there to meet a Chinese or other most-distant native of our planet, we should look upon him as a near relative and suddenly commence a friendship with him." Which reminds me of that fine passage from Cicero: "If we were to ascend into the heavens and behold all the majesty and harmony of the universe, that sight, however glorious, would, still, be uninspiring had we not some friend anear to whom we might communicate our thoughts."

Yet, gentle as are the ministrations of friendship, there are seasons when solitude itself is sweet, when all intrusion seems unkind, and the spirit of man must wander in lonely contemplation of the mysterious divinity that encompasses its throbbing life. "Solitude is the audience-chamber of God." It has been well observed that loneliness, after all, is but relative and that solitude often is less solitary than society—where solitude is calm and clear, while society only brings home to us our isolation; and the truth that our real lives are almost wholly concealed from others is beautifully portrayed in Keble's lines:

Sing, little birds, but, oh, my heart will break

With sorrow as I listen bowed in tears.
Sing on in joy for your bird-love's sweet sake—

I mourn the loss of all that earth endears.

[To be continued.]



Among the Books

EISENBERG: "BACTERIOLOGY"

Principles of Bacteriology. By Arthur A. Eisenberg, A. B., M.D. Illustrated. St. Louis: The C. V. Mosby Company. 1918. Price \$1.75.

The little volume before us represents, with certain additions, the author's syllabus of lectures on bacteriology delivered to the nurses at several of the Cleveland hospitals. It was prepared in order to fill up the vacancies existing in various textbooks of bacteriology for nurses, and is written in as simple language as possible. The author has made a decided innovation in textbooks of bacteriology for nurses, in that he has dealt deliberately with the rationale and the principles of bacterial prophylaxis, discussing the mode of infection, disinfection, and prophylaxis and dealing with the individual microorganisms. In other ways, too, he also gives free abstracts of the theories of immunity, and which are so necessary for a proper application of bacteriological knowledge.

The little book certainly is of value, not only for nurses, but, also for physicians, especially those whose college-days antedate the general study of, and instruction in, bacteriology—there still are among us a good many of these oldtimers to whom the highly technical current textbooks on bacteriology are of comparatively little use.

OSTRUM: "MASSAGE"

Massage and the Original Swedish Movements: Their Application to Various Diseases of the Body. By Kurre W. Ostrom. Eighth edition, revised and enlarged. With 125 illustrations. Philadelphia: P. Blakiston's Son & Co. 1918. Price \$1.00.

This little book contains lectures delivered before the training-schools for nurses connected with the hospital of the University of Pennsylvania, German Hospital, Women's Hospital, Philadelphia Lying-In Charity Hospital, Philadelphia Polyclinic and College for Graduates in Medicine, and the Kensington Hospital for Women, of

Philadelphia. The present edition was revised by Mr. Silfverberg at the hand of notes left by the author, Mr. Ostrom, deceased. Like the preceding editions, this little book will be of service to those who are interested in massage-treatment.

SCHUELLER-STOCKING: "ROENTGEN DIAGNOSIS"

Roentgen Diagnosis of Diseases of the Head. By Dr. Arthur Schüller. Authorized Translation by Fred F. Stocking, M. D., M. R. C. St. Louis: C. V. Mosby Company. 1918. Price \$4.00.

While the treatment of head diseases, more especially intracranial conditions, is surgical and should be limited to men who have acquired special surgical ability in this field, the diagnostic knowledge may and should be possessed by the general practitioner. Indeed, there are many conditions involving the general health and producing symptoms that come under the observation of the general practitioner which really originate in structural changes within the cranial cavity. The recognition of these often is not possible without roentgenologic examination, the facilities for which nowadays are considerably greater than was the case formerly. Doctor Schüller's book on Roentgen-diagnosis of diseases of the head constitutes the first comprehensive study of its kind. The translation was approved for publication by the Surgeon-General of the United States Army and may be accepted as of practical value.

LUYS: "CYSTOSCOPY AND URETHROSCOPY"

A Treatise on Cystoscopy and Urethroscopy. By Georges Luys. Translated and Edited with Additions by Abr. L. Wolbarst, M. D. Illustrated. St. Louis: C. V. Mosby Company. 1918. Price \$7.50.

Until recently, the method of indirect cystoscopy has been in greater favor in America than was the direct-vision method

and it is in part because Doctor Luys' work is frankly a plea in behalf of the direct method that its translation into English was undertaken. The book will be welcomed because it presents extensive and illuminating historical data, showing the origin and development of cystoscopy and urethroscopy. It contains a detailed and, as far as the Reviewer can tell, an impartial comparison of the indirect and direct methods, even though the author frankly prefers the latter. Finally, the information derived through ureteral catheterization and the practical application of cystoscopy are considered in detail. This book is well gotten up, beautifully printed and copiously illustrated. To physicians devoting much attention to genitourinary diseases, it will be a welcome addition to their library.

KOPLIK: "DISEASES OF INFANCY AND CHILDHOOD"

The Diseases of Infancy and Childhood. Designed for the use of Students and Practitioners of Medicine. By Henry Koplik, M. D. Fourth Edition. Revised and Enlarged. Illustrated with 239 Engravings and 25 Plates in Color and Monochrome. Philadelphia: Lea & Febiger. 1918. Price \$6.00.

Times change. When the Reviewer was in general practice, not a great many years ago, it was customary to wash the mouth of the infants, either after each feeding in bottle-fed infants or two or three times daily in breast-fed infants. Doctor Koplik declares that there is really no scientific indication for doing this if the rubber nursing nipples and the bottles used for artificially fed infants are kept scrupulously clean; and, with the breast-fed infant, if the mother's or nurse's breast nipple, be cleansed with a solution of boric acid before and after each nursing. Before the eruption of the teeth, the natural secretions of the mouth are quite sufficient to keep the mouth clean. Indeed, it has been shown conclusively that washing the mouth of infants is productive of infectious ulcerations of the mucous membranes of the buccal cavity as well as the means by which extraneous infections are engrafted on the mucous membrane.

In looking through this latest edition of Doctor Koplik's book, we were interested

in various other points, for instance, his discussion of bacterial-vaccine therapy in children; also his remarks on the administration of drugs and other methods of therapy in children. In these as well as in the discussion of diseases as they are observed and call for treatment in children, the author's disquisitions are the result of wide observation and judicious consideration. We like this volume on children's diseases and commend it to physicians.

BACON: "OTOTOLOGY"

A Manual of Otology. By Gorham Bacon, A. B., M. D. Assisted by Truman Laurance Saunders, A. B., M. D. Seventh Edition, Revised and Enlarged. With 204 Illustrations and 2 Plates. Philadelphia: Lea & Febiger. 1918. Price \$3.00.

This is a compact and handy book of reference for the general practitioner on diseases of the ear concerning which he certainly is in need of a certain amount of information. The book is out in its seventh edition which is ample testimony of the favor with which it was received, and the good that it has accomplished.

STALL: "THE CHILDREN ON SUNDAYS"

With the Children on Sundays. Through Eye-Gate and Ear-Gate into the City of Child-Soul. By Sylvanus Stall, D. D. Philadelphia. The Vir Publishing Company. 1911. Price \$2.00.

For some children, Sunday used to be (and in some instances still is) the gloomiest day in the week. There still are people who take their religion as a great burden and as being essentially a state of "don'ts." Accordingly, the children are prevented from doing everything that is pleasant on Sunday, which is supposed to be dedicated to the Lord, and they come to entertain a cordial dislike for this day which ought to be the most cheerful, sunniest, happiest and best day of the week. Instead of repressing children, it would be so much better to guide them and stimulate them and to train their thoughts along appropriate subjects. Dr. Sylvanus Stall introduces in the present volume the idea of "playing church". He describes also many occupations and games that may be indulged in suitably by the children on Sunday and without any

fear whatever of desecrating the Holy Day. Undoubtedly, the book contains numberless valuable suggestions. Those to whom Sunday is a sad day may study it, together with their children, and benefit from it.

KEYES: "UROLOGY"

Urology: Diseases of the Urinary Organs, Diseases of the Male Genital Organs, The Venereal Diseases. By Edward L. Keyes, Jr., M. D. With 204 Illustrations. New York: D. Appleton & Company. 1917. Price \$6.50.

MORTON: "GENITOURINARY DISEASES AND SYPHILIS"

Genitourinary Diseases and Syphilis. By Henry H. Morton, M. D. Fourth Edition, Revised and Enlarged. With 330 Illustrations and 36 Full-Page Colored Plates. St. Louis: C. V. Mosby Company. 1918. Price \$7.00.

BETHEA: "MATERIA MEDICA"

Practical Materia Medica and Prescription Writing. With illustrations. By Oscar W. Bethea, M. D., Ph. G. Second Revised Edition. Philadelphia: F. A. Davis Company. 1917. Price \$4.50.

The first part of this volume contains a condensed *materia medica*, describing the main important galenical remedies, and, in some instances, their alkaloids. The second portion is devoted to the theory and practice of prescription writing, an art that seemingly has almost been lost. It may be well for all of us to study prescription writing and, indeed, the entire discussion presented so interestingly by Doctor Bethea.

HOPEWELL-SMITH: "HISTOLOGY OF THE MOUTH"

The Normal and Pathological Histology of the Mouth: Being the Second Edition of The Histology and Patho-Histology of the Teeth and Associated Parts. Revised and Enlarged. By Arthur Hopewell-Smith. Volume II. Pathological Histology. With 394 Illustrations in the text, including Photographs and Photomicrographs by the Author. Philadelphia: P. Blakiston's Son & Co. 1918. Price \$4.50.

While the first part of his volume is of interest mainly to dentists, as it deals with

the normal and pathological histology of the teeth, the second part may be studied advantageously by physicians likewise, treating as it does the pathological conditions of the gums, palate, antrum, jaws, oral mucous membrane, and so forth. One chapter is devoted to the problems of oral microbiology.

TYLER: "ROENTGENOTHERAPY"

Roentgenotherapy. By Albert Franklin Tyler, B. Sc., M. D. With 111 illustrations. St. Louis: C. V. Mosby Company. 1918. Price \$2.50.

This is a brief manual designed especially for the novice and enabling him to grasp the principles of x-ray treatment readily. A description of the necessary apparatus introduces the book, being followed by chapters on superficial roentgenotherapy, on deep therapy, and on the x-ray treatment of malignant growths. A further chapter contains numerous instructive case histories which are elucidated, moreover, by many illustrations.

GRULEE: "INFANT FEEDING"

Infant Feeding. By Clifford G. Grulee, A. M., M. D. Illustrated. Third Edition, Thoroughly Revised. Philadelphia: W. B. Saunders Company. 1917. Price \$3.25.

Doctor Grulee's views concerning infant feeding follow in substance those elaborated by Finkelstein and he has also adopted Finkelstein's classifications of nutritional disturbances, though with some modifications. The problem of infant feeding, of course, is an exceedingly important one, and general practitioners should, by all means, study the methods as they are developed and proved in children's hospitals and children's wards. It is for this reason that Doctor Grulee's book is a welcome guide for the general practitioner.

HILL-GERSTLEY: "INFANT FEEDING"

Clinical Lectures on Infant Feeding. Boston Methods by Lewis Webb Hill, M. D. Chicago Methods by Hesse Robert Gerstley. Philadelphia: W. B. Saunders Company. 1917. Price \$2.75.

This book of clinical lectures presents a somewhat new method of postgraduate medical education, in accordance with a

plan originating with Dr. W. S. Rankin, the secretary of the North Carolina State Board of Health. The authors of the lectures presented in the book before us gave them under the auspices of the University of North Carolina and the State Board of Health in several towns throughout that state to the physicians who were thus enabled to receive welcome instruction without being compelled to leave their practices.

There is a further novel feature in this little treatise in that one author was trained in the methods used in Boston, while the other received his instruction in Chicago with postgraduate work in Europe. In consequence, the lectures differ in some points enabling the reader to compare the teachings of the two schools of infant feeding.

BERGEY: "HYGIENE"

The Principles of Hygiene. A Practical Manual for Students, Physicians, and Health-Officers. By D. H. Bergey, A. M., M. D. Sixth Edition, Thoroughly Revised. Philadelphia: W. B. Saunders Company. 1918. Price \$3.50.

The sixth edition of Bergey's manual on hygiene comes out at a fortunate time, since it is important that the steady advancement of our knowledge of hygiene be recorded from time to time. It often has given the Reviewer much pleasure to be able to recommend this manual to physicians who consulted him in regard to a handy and authoritative treatise on the subject of hygiene, which yet is not too cumbersome. The new edition will be quite as much subject to recommendation as the former ones.

ANDERS: "PRACTICE OF MEDICINE"

A Text-Book of the Practice of Medicine. By James M. Anders, M. D. Thirteenth Edition—With the Assistance of John H. Musser, Jr., B. S., M. D. Illustrated. Philadelphia: W. B. Saunders Company. 1917. Price \$7.50.

The latest edition of Anders' clinical text-book of the practice of medicine was prepared with the assistance of Dr. John H. Musser Jr., and is the product of a close and thorough revision of the last issue. The new material that has been added is so extensive and important that possessors of

the older editions will naturally want to acquire this later book. The new material deals especially with the treatment of tetanus, acidosis in diabetes, treatment of asthma, anaphylaxis of food intoxication, focal sepsis, pyorrhea alveolaris and various other affections on which recently much work has been done. Other subjects have been rewritten, such as, prophylactic vaccination, specific therapy in typhoid fever, specific therapy in tuberculosis, pellegra as a nutritional disorder, splenic anemia, intestinal toxemia, bacteriology of whooping cough, hemolytic jaundice, and the diseases of the nervous system. So, it will be seen that just those diseases that have presented so many serious problems in the past have received special consideration with reference to the most recent discoveries and experiences.

"PRACTICAL MEDICINE SERIES"

Vol. VIII of *The Practical Medicine Series* closes the collection for 1918, and is devoted to nervous and mental diseases. Naturally, the war has given rise to various neuroses and psychoses providing a great abundance of neurologic material the literature of which during the preceding year is abstracted in the volume before us and which sells separately for \$1.40.

The Practical Medicine Series is issued in eight volumes annually by the Year Book Publishers, Chicago, Illinois, at a subscription price of \$10.00. The individual volumes are devoted to special subjects and may be purchased separately.

NEISWANGER: "ELECTRO-THERAPEUTICAL PRACTICE"

Electro-Therapeutical Practice. A Ready Reference Guide for Physicians in the Use of Electricity and the X-Rays. Nineteenth Edition Revised. By Chas. S. Neiswanger, M. D. Chicago: Ritchie & Company. 1918. Price \$3.50.

The nineteenth edition of Doctor Neiswanger's manual on electro-therapeutical practice has been out for several months, and contains the actual requirements of electro-therapeutical methods as they have been proved of merit. When a book has reached its nineteenth edition, it hardly stands in need of commendation. It goes without saying that it is good.

Condensed Queries Answered

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report their results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

Queries

QUERY 6416.—“Lues and Gonorrhea Innocently acquired.” J. E. C., Missouri, has as a patient, a married woman, 27 years of age, weighing 110 pounds, 5 feet 3 inches in height, who has been treated by three or four other physicians, some of whom suggested an x-ray examination and treatment with the same. Says the Doctor:

“She was a country-raised girl, lured to city-life, and found a position, in a well-to-do private family, as general helper in the house. All went well until she made the acquaintance of a young city dude, and married him. The fellow infected her badly with gonorrhea. She went home to the parental roof in the country. In time, she gave birth to a girl babe, now four years of age, a sprightly little thing. She has been in this place now three months, working at light housekeeping for an aged man and wife. Has no hard work to do.

“So far as I have been able to learn about her family-history, that is negative. Examination disclosed an old indolent ulcer, 4 inches below her right knee-joint. This ulcer is about the size of a 25-cent silver coin, deep and of ashy color, the edges looking angry, having a veritable *noli me tangere* appearance, dark-red in color, with the tissues red 6 inches below the ulcer; her leg, from the knee to the end of the toes is somewhat edematous; there is some stiffened condition in both knees and some tenderness in these joints; she has a bad breath, the tongue is coated, brownish-looking, but, moist, looking as if having been scalded, and having a patch-like appearance.

“She menstruates every three weeks, this lasting a whole week; which keeps her weak. There is some discharge from the vagina, To the left of the urinary external meatus, I find a fiery-red excrescence, so tender

that as yet I have been unable to introduce even a small vaginal speculum. This condition, she says, has been that way for several years. The vaginal discharge causes soreness of the labia. Her bowels are constipated, the urinary organs apparently are in a healthy condition.

“I am giving her an antirheumatic remedy composed of potassium iodide, colchicum-wine, Fowler’s solution, macrotys, ammoniated tincture of guaiac, and salicylic acid, full doses of each, every four hours. Also protoiodide of mercury, 1 tablet (gr. 1-4) after meals, and 1-2 teaspoonful of specific medicine of echinacea every four hours—a good hepatic remedy for a general cleaning out.

“I dress the ulcer daily, cleanse it with a good surgical soap, bathe it well with hydrogen peroxide solution, keep the parts damp with a 50-percent solution of echinacea. What better can be done? I have her on a proper diet, including plenty of fruits, oatmeal, et cetera. Can you tell me what to do other than what I am doing? I also have ordered vaginal douches with a strong solution of potassium permanganate, night and morning.”

There is little doubt in the present writer’s mind, doctor, that your patient is luetic, that is to say, she has contracted, not alone gonorrhea, but, also, syphilis. It is, of course, a question as to whether the one young married city-man is responsible for both of these infections, especially since she seems to have given birth to a child that did not suffer from ophthalmia and now, at four years of age, is, as you describe her, “a sprightly little thing.”

It might be well to investigate this patient’s past history a little more thoroughly and, by all means, before attempting further treatment, have a Wassermann test

made. Should it prove positive, as we are morally certain it will, active specific treatment should be instituted without delay.

You say that "to the left of the meatus I find a fiery-red excrescence, so tender that I have been, as yet, unable to introduce a small vaginal speculum." If this excrescence is situated just at the orifice of the meatus, you have to do with a caruncle, and it should be promptly excised and the urethra dilated.

The exact source of the vaginal discharge should, of course, be ascertained. It is absolutely necessary to discover whether the uterus and adnexæ are involved. Specimens of discharge, both from the vagina and cervical canal, should be submitted to a competent pathologist, for examination.

We should be inclined to treat the ulcer with chlorazene or dichloramine-T. Temporarily, you might cleanse the sore thoroughly, once or twice daily, with a 1-percent solution of chlorazene and then apply a bit of chlorazene cream.

If the young woman has syphilis, she should receive, intravenously, sodium eacodylate or neosalvarsan, and, in alternation, mercury in any acceptable form.

Should the Wassermann test prove negative (which we consider unlikely), and the Neisser bacillus alone be found present, an autogenous or a gonococcus-combined-bacterin, should be administered.

This is one of the cases that require a somewhat prolonged and careful treatment, especially since the infection is of such long standing.

QUERY 6417.—"Arthritis and Endocarditis." J. S. H., Tennessee, writes: "I have a boy patient, twelve years of age, in whose case I desire your help. Two months ago general dropsy developed in the little fellow, being very much swollen all over his body. This lasted for about four weeks and disappeared under appropriate treatment; however, it recurred in two weeks in a milder form. The treatment for dropsy was again given and the swelling left. The heart is the cause, so I think. He has a missing beat and an enlarged precordial area, the apex is misplaced to the right near the sternum. The patient is weak, I can not get him to use himself any, he won't stand on his feet. His blood is below par. His elbows are slightly swollen and sore and he can not

bend them without pain. It may be rheumatic, but, there is no history of rheumatism previous to this attack.

"The boy has a morbid appetite, but, has been restricted to a dry diet. His urine is normal, or, it was two weeks ago. The most marked symptom is that he has no strength and does not try to use himself—can not or will not exert himself. In some respects, his heart is better, that is, not quite so stormy. He has taken Basham's mixture with cactus, anedemin tablets, fluid extract of apocynum; also, at first, digitalis and iron. But, now he needs, if possible, to be built up or to gain strength. He is thin now, has no weight, and, as a matter fact, needs heart-medicine."

From the symptoms that you describe about this patient, we strongly suspect arthritis ("inflammatory rheumatism"), which now seems to be localized in the elbow. If we are correct in this assumption, the trouble with the heart would at once be explained as an acute endocarditis.

In such a case, there would be ample reason for the weakness of the patient and for the fact that he will not exert himself. Probably the little chap is too weak and feeble for exertion. In any inflammation of the heart, whether it be the endocardium, myocardium or pericardium, bed-rest is an important factor. It is only after the acute inflammation has subsided and the heart action is again approaching a normal quality, that very carefully regulated exercise may be undertaken.

Gentle hydropathic measures probably will be beneficial, especially in quieting the irritated heart action. Sponging of the body with magnesium-sulphate solution undoubtedly will be of benefit. Compresses with the same solution may be placed over the heart for one-half to one hour at a time when the action is stormy.

For the painful elbows, external applications, containing menthol, guaiacol, methyl salicylate, or similar remedies, will give relief.

The food should be regulated so as to involve the least strain upon the kidneys, while elimination is maintained through the intestines. The present writer does not believe that a moderate amount of meat and other protein foods will be injurious, but, always with the proviso of maintaining ample elimination.

As to drug-treatment, digitalis undoubtedly seems to be indicated. Also, it may be

necessary to secure positive sedation with hyoscyamine or even with small occasional doses of hyoscine and morphine. A ferruginous tonic, such as the combined arsenates with nuclein, perhaps alternating with nucleinated phosphates, undoubtedly will do good.

Gentle massage should be given daily until such a time as the patient may be able to be up and move about on his own account.

It would be well to watch and record the total 24-hour quantity of urine voided by this patient and to maintain the elimination of a suitable amount by means of heart-remedies, such as they are represented in the proprietary anedemin. We have no hesitation in saying that we consider the anedemin formula as very excellent and believe it can be used with confidence.

QUERY 6418.—"Dermatitis Herpetiformis." J. A. M., South Carolina, has a little patient who is suffering from a peculiar form of eruption that is giving the Doctor considerable concern. He describes it as follows:

"The little girl, two years old, of blond type, had had this eruption for quite a long time before I located here and had been unsuccessfully treated by several other physicians. It starts with a vesicle not unlike ordinary itch; it is not confined to any portion of the body; now involving principally the back, buttocks and lower legs. In a few days, the vesicles contain pus, which escapes, owing to the child's scratching. The sores scab over and heal under the scab; however, other vesicles quickly form. After healing, there is left a reddened base, the redness disappearing upon pressure, but, returning when the pressure is removed. Yesterday, one of her legs began to take on an erysipelatous look, the inflammation extending up to the knee.

This, possibly, may be the vesicular form of eczema; still, we are inclined to believe that you are dealing with a form of dermatitis herpetiformis. In children, the element of multiformity often is wholly lacking, the eruption being of a vesicular character, without admixture of other types.

The limbs, especially the legs, commonly are involved, although the greater part of the trunk may show typical lesions. As a rule, the vesicles are somewhat odd as to shape, being of a peculiarly striking irregular outline. In size, they rarely are

smaller than a pinhead and may be the size of a small pea. The scattered pustules may be large. Itching is a constant and most troublesome feature. One group of vesicles may follow another for weeks or, even, months. In all these cases, indican is present in the urine, and mostly there is eosinophilia.

Whether you have to do with a case of typical eczema or of dermatitis herpetiformis, the condition of the body-chemistry must be ascertained. Therefore, we would advise that you secure a specimen of the child's urine (4 ounces from the mixed 24-hour output, stating the total amount voided), for examination. Also, please, tell us just how long the condition has existed, the exact character of the initial lesion, and whether there is any staining or discoloration.

You probably will find creolinated zinc-oxide ointment an excellent application. It should be applied after the parts have been thoroughly sponged with boric-acid solution. The proportions that the present writer has found most satisfactory are: zinc oxide, 20 percent; creolin, 2.75 percent; ceresin, 10 percent; petrolatum, enough to 100 parts.

Internally, the patient may be given very minute doses of arsenous sulphide, three times daily; also, nuclein should be administered in rather full doses.

QUERY 6419.—"Arthritis Deformans." F. H. Missouri, and C. B., Michigan, both inquire as to what can be done for the relief of patients suffering from arthritis deformans.

We regret that, offhand, we would say: mighty little. If you are able to determine the actual bacterial etiology in a particular case, the trouble *may* be arrested. Usually it constitutes a streptococcal infection, in some cases, the bacillus of tuberculosis stands in relation, and a physician in Texas has reported to us several cases of this distressing malady that he succeeded in arresting, in fact, he was able to bring about a clinical cure by means of specific anti-tuberculosis treatment.

In any given case, it might be well to determine the bacteria responsible by means of diagnostic injections of vaccine. As you know, an infection with certain bacteria sensitizes the organism to the parenteral introduction of related vaccines, so

that this will be followed by systemic and local, and focal reactions.

Supposing a vaccine is administered in small dose, in a case of arthritis deformans, which contains the bacteria that are responsible for this particular case of disease. The injection will be followed, after twelve or twenty-four hours, by pain in the affected joints, by general malaise, fever, possibly swelling, the whole symptom complex sometimes being ushered in by a chill and lasting for from one to three or four days. In such a case, the reaction would be followed by improvement all along the line and, after a suitable period of time, the dose might be repeated, either in the same amount or slightly increased, and this might be kept up at intervals until the patient no longer reacts.

Such a procedure, if the correct vaccine is used, in most cases will bring about an arrestment of the trouble.

There is a further point to be taken into consideration in determining the etiology of arthritis deformans, and that is, that, very often, it originates in some focal infection, that may be localized in the tonsils, at the roots of the teeth (pyorrhea), in the gallbladder, in the rectum, and elsewhere. It is, therefore, of great importance to examine a patient with arthritis deformans very carefully and to eliminate all possible points of focal infection from which the offending bacteria might be carried to the joints by way of the circulation.

First of all, the tonsils should be searched for crypts and pus-pockets. The teeth should be x-rayed and receive attention if pus-pockets are found; the rectum should be inspected carefully and searched for pockets, sinuses or any spots in which pus collections are present. Finally, the gallbladder should receive attention. If an open focus can be detected and the pus be obtained, this would, in all probability, give the basis for an autogenous bacterin that would promise results better than anything that could be prepared in the way of stock vaccines.

As for general treatment, the old idea of "clean out, clean up and keep clean" holds good. Then, systemic and antitoxic remedies, like calcium sulphide and echinacea, might be given in full doses, at the same time securing thorough elimination. It goes without saying that the history of the patient should be investigated with care

because the disease may follow, for instance, an attack of gonorrhea, an attack of typhoid fever, of scarlet fever, of tuberculosis, and of other infectious diseases.

For the relief of pain, you may have to resort to salicylates, such as acetylsalicylic acid (aspirin), which, however, always should be guarded with monobromated camphor. Phenacetin sometimes is of service while, in extremely painful attacks, hyoscine with morphine may have to be employed. Naturally, it is necessary to be extremely careful in the use of morphine except in an otherwise hopeless condition where the possible development of an addiction would be less serious than is the severe pain.

External applications to the affected joints are not of very great value, as a rule. Sometimes, a combination like guaiacol, grs. 40; methyl salicylate, grs. 40; menthol, grs. 3; lanum and petrolatum to make oz. 1, proves very effective. When there is an acute exacerbation, with evidences of inflammation, you will find an antiphlogistic paste like pneumophthysine of service. Often, dry heat, by means of flannel cloths kept warm by hot-water bottles, will ease pain as well as anything else. In other cases, the hot-air cabinet, electric-light cabinet, and similar appliances are useful.

So you see, Doctor, that the problem confronting you is, by no means, an easy one, but, if you can succeed in clearing up all doubtful points in the etiology of your patient, you will, thereby, be put in a position to bring about at least a considerable improvement and, probably, an arrestment of the process.

We do not suggest many medicines in this reply, Doctor. Drug treatment does not go very far, yet, certain reports on the utilization of socalled nonspecific-protein reactions indicate the possibility of relieving even so severe a disease as arthritis deformans. As a matter of fact, though, these nonspecific-protein-reactions are in reality specific. They are brought about by means of vaccines and this question has received attention in the body of the letter. The physical methods of treatment sometimes offer great possibilities, especially light-treatment (ultra-violet rays), also high-frequency and vibration. As to these, however, you had better consult some of the textbooks on the subject.

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The Venereal-Disease Problem

A FEW weeks ago, Dr. Rupert Blue, Surgeon-General of the Public Health Service, sent a circular-letter to the physicians of the United States, containing an appeal for cooperation in the fight against venereal diseases. Physicians owe careful attention to this matter and whole-hearted support of the movement instituted to limit the spread of venereal diseases, because of the great amount of suffering and illness that they entail, as also because of their socioeconomic importance. Furthermore, the moral factor must concern physicians no less than it does others, for the reason that physicians cannot dissociate themselves from the rest of the community on questions that concern the morality of the latter. Moreover, the problem may become a decidedly personal one for physicians, since members of their own families may be affected just as much as are others, and because, unfortunately, many times the victims become that innocently, without any sowing of "wild oats" or seeking for the *alleged "good time."*

The bulletin enclosed with the Surgeon-General's circular letter points out, especially, the ineffectiveness of self-treatment, on the part of infected persons, by

the use of simple remedies or nostrums, and also the danger in resorting to quack doctors that advertise as "specialists" in treating the socalled private, or blood-diseases. The value of proper methods of treating venereal diseases in the army has been demonstrated conclusively, and it is with great justice that the appeal is made, now that the men are returning from military service in camp and abroad, to extend to the men in private life the efficient work as done in the army and especially to cooperate in suppressing the disastrous self-treatment and quackery.

Many retail pharmacists have responded to requests by the government that they discontinue the sale of remedies for the self-treatment of venereal diseases. In a recent issue of this journal (January, page 5), we recorded the action in this direction taken by the Owl Drugstore chain. These druggists have agreed to direct customers to competent physicians and to venereal-diseases clinics. In return, physicians are requested to cooperate, by agreeing to have their prescriptions filled only at high-class drugstores. For this reason, the agree-

ment that Surgeon-General Blue asks physicians to sign provides, among other things, that physicians refrain from dispensing medicines.

Each member of the profession should understand the seriousness of statements frequently made, that a majority of physicians refuse to treat venereal diseases and that many of those that do are careless in their methods of treatment. It is asserted that this probably is one reason for the continued spread and existence of venereal disease, and, so, the responsibility for this state of affairs is thrown upon the medical profession.

Therefore, it clearly behooves general practitioners to pay more attention to the pathology, diagnosis, and treatment of venereal diseases and to fit themselves for their effective management. We can not doubt but that it is possible for physicians in this, as in other respects, to become real and beneficent educators and to contribute materially toward the elimination of this scourge that has sapped the strength of so many people and peoples.

CLINICAL MEDICINE desires to request every one of its readers to cooperate with the government-services in this laudable undertaking. If there are reasons why dispensing should not be foregone, by any practitioner, it is a simple matter to cross out that part of the agreement of the blank postal card submitted before it is returned to the Public Health Service at Washington.

A PECULIAR REQUEST

The United States Public Health Service is requesting the physicians of this country to agree not to dispense medicines in the treatment of venereal cases, except when these medicines are not obtainable at a neighborhood drug store. Some time ago, this Service made a request of the druggists not to sell over the counter remedies for the treatment of venereal diseases, but, only upon physicians' prescriptions.

The evident intent of this movement is, to lead up to such a situation that the Government can secure a record of every venereal case by consulting the druggists' prescription-files. However, we doubt, that, in practice, such a plan will prove satisfactory. The majority of young men, and also of women (old and young) who contract a venereal disease and go to a physician

for treatment wish to avoid the very publicity which this scheme entails, and it is for this very reason that many physicians prefer to supply the necessary remedies in cases of this kind, because this protects the patient from publicity and particularly from drugstore gossip.

We confess that we are suspicious of plans of this kind, plans that interfere with the physician's freedom of choice as to whether he will dispense or prescribe any medicaments. The right to make a decision for himself is one that no doctor will readily surrender. Those who are endeavoring to bring about legislation designed to interfere with this right and to compel him to prescribe rather than to dispense are, in nearly every instance, those that are financially interested in the prescription-side of the doctor's business.

The vital point about wages is not the rate per day or per week, but the rate per unit of production. Efficient labor is worth high wages. But, the man who demands high wages without giving efficient production in return, injures himself and is unfaithful to the wage earning masses. He adds to the cost of the necessities and comforts which his fellows must buy.

—George E. Roberts.

THE BUGBEAR OF COALTAR PRODUCTS

In at least one-half of the communications which we have received concerning the management and treatment of influenza during the recent epidemic, the writers have sounded impressive warnings against the employment of coaltar products, directing their severe criticism especially against such drugs as acetylsalicylic acid (aspirin) and acetanilid. According to some writers, the coaltar products are pernicious, almost unconditionally, and are denied any saving grace. They seem to be in as bad a position as is spiritus frumenti and its allied drugs.

On the other hand, these same writers with some little inconsistency are enthusiastic prescribers of the sulphocarbonates, of salicylates, creosote and its various derivatives, and so forth, ignoring blissfully that all of them are derivatives of phenol and, hence, are coaltar products.

It is the old story of giving a dog a bad name. Some years ago, incidental to the fight against nostrums and quackery, acetanilid preparations were condemned roundly and with perfect justice in so far as they were sold for home consumption, for self-prescribing and by counter-pre-

scribing. This was quite proper for the reason that a great amount of injury had been done by the indiscriminate use of acetanilid. Nevertheless, like the devil, acetanilid is not as bad as it is painted. Indeed, it is a very useful drug. The present writer remembers a minor epidemic of influenza in the fall of 1898. He had just settled in a new location, in country practice, and he succeeded in establishing a very fair name throughout the countryside for the success attending his efforts in alleviating the distressing symptoms of influenza in those attacked, doing so by means of various combinations of acetanilid. To be sure, the drug was never given haphazard, nor in excessive doses, nor without suitable protection of the heart. Nevertheless, it was relied upon and it made good. Since then, acetanilid many times has been employed with decidedly satisfactory results.

There is an old saying that it is not well to empty out the bathtub with the baby in it. That is to say, it is never well to point one's criticism inclusively without excepting those things that do not require, do not stand in need of, criticism. The irresponsible, unguarded, excessive use of acetanilid, as of many other coaltar products, is productive of harm in some instances. From that it does not follow, though, that they should be exterminated root and branch and eliminated from the pharmacopoeia and the formulary and from the medicine cabinet of every physician. By going to such absurd lengths, we would deprive ourselves of an exceedingly useful servant that, however, is useful only as long as we keep it in the position of our servant, remaining truly master in so far as we fully know when and how to employ it.

Of course, the same is true of almost everything that can be suggested. Condemnation of misuse never should include proper use; or, as the old Latin saying goes, *abusus non tollit usum*.

MURDER OF A PHYSICIAN

Last February, Dr. I. M. J. Hotvedt, a physician who had practiced for twenty years in Muskegon, Michigan, was shot by a patient, an Italian, because of the doctor's failure to cure him of hernia. It seems that the man had been advised by Doctor Hotvedt to submit to certain operative treatment, but, which, unfortunately, proved unsuccessful. When he realized

this, he became maddened, visited the doctor's office and fired five bullets into his head, to which Doctor Hotvedt succumbed in the ambulance as he was being taken to the hospital.

I can not make up my mind to base a moral upon this tale, as the details available are so very scant. The experience simply shows that occasionally the life of a physician may be a hazardous one in more respects than those usually recognized as attaching to it. We must assume, as the most charitable explanation, that the murderer was mentally unbalanced, even if only because he was (perhaps) crazed by an ungovernable temper. Possibly, the doctor may have promised more than was wise; possibly, the man only thought that he had done so.

A man may be a heretic in the truth; and if he believes things only because his pastor says so, or the assembly so determines, without knowing other reason, though his belief be true, yet the very truth he holds becomes his heresy.—Milton.

SODIUM SALICYLATE IN SCARLET FEVER

Doctor Rittenhouse's article on the use of sodium salicylate in scarlet fever gives an interesting illustration of the various affections in which salicylic acid and its derivatives have been found of value. Though primarily a remedy of almost specific action in acute "rheumatism", the several modes of action of the drug have led to its employment in other conditions associated with pain and fever, especially those that are due to the pathogenic action of bacteria.

While salicylic acid especially acts by relieving pain and also lowers the fever temperature, there seems to be exerted by it a mildly antibacterial action which would account for the favorable effect in infectious diseases. It has been claimed that intestinal putrefaction can be reduced with it. Certainly, it tends to arrest fermentation, and an excess of this arrestment may have the unfavorable result of interfering with the digestive processes. However, salicylates are considered of value in such diseases as acute tonsillitis or peritonsillitis, in which they relieve pain and swelling, shorten the period of illness and, perhaps, obviate suppuration if given early. In erysipelas, also, salicylates have been found to act with great rapidity, relieving pain, cutting short the disease, and causing it to end in rapid recovery. In influenza, as

also in pneumonia of influenzal origin, further in pneumonia succeeding measles, in pharyngitis, laryngitis, and bronchitis, salicylic acid has been used with good success by local applications. Further, the drug has been found useful in mumps, in puerperal fever, and in bilious headaches, the latter, possibly, because large doses of the salicylates are said to stimulate the formation of bile.

There is only one point that, while not causing us to hesitate to commend Doctor Rittenhouse's treatment of scarlet fever, still makes it desirable to use caution in its administration; and that is, the tendency of salicylates to irritate the kidneys and also to depress the heart. Both factors are to be taken into consideration in a serious malady like scarlet fever, which of itself is so prone to be followed by nephritis and in which the circulatory apparatus often is overcome, or, at least unfavorably influenced by the bacterial toxemia. According to Doctor Rittenhouse's experience, danger in this direction appears to be slight. Nevertheless, it may be well to keep its possibility in mind.

To attract lasting friends a man has to be, not, to seem. Let a man seek to cultivate merit, and he will not have to go out of his way to "cultivate" friends.

—Albert H. Wiggin.

ABOUT THE LABOR UNREST

What has the labor-question to do with in a medical journal? A great deal, my dear doctor. At least, the editor of *The Medical Press and Circular* (Feb. 12) thinks so, asserting that the present labor unrest affects the medical man in more ways than one; not only because of its bearing upon public health, but, because no profession has better opportunities for influencing the community than has ours. When public questions come up in conversation, the physician sometimes is able to throw in a tactful word or two that may bear fruit.

The medical profession is second to none in its desire for the welfare of the masses, and there is little doubt that, in time, the lot of the people will be greatly bettered; however, such improvement can come only by degrees—it can not be rushed.

Speaking more particularly of conditions in England, the editor of *The Medical Press and Circular* points out that it must be obvious to anybody who will but take the trouble to think accurately upon the

facts in the case that the present epidemic of strikes needs will defeat its own end.

Now, that the war is over and stock can be taken of its great destruction of life and wealth, all nations alike are confronted by the task of reconstructing their national households and there is evident a universal determination to work for the betterment of the poorer classes, which have borne their full share in bringing about the successful outcome of the war. One purpose of the work of the reconstruction—and an aim in itself, if you will—is, the building up of wealth. It is only by producing the necessary wealth that the "working classes" can secure that which they are clamoring for, that is, more money, and more leisure to enjoy it.

I have put the word "working classes" in quotation-marks, because the term that usually is employed to designate a certain portion of the population is a misnomer, inasmuch as representatives of almost every other class of the population are workers, and hard workers at that. However, let us get back to our buttons.

It has been demanded by strike-leaders, that the workingman shall be enabled to have the comforts and leisure enjoyed by the middle classes. The editor of *The Medical Press and Circular* shows the absurdity of this demand, if it is to be complied with at once; for, it would mean, among many other things, the immediate erection of millions of well-equipped houses, the making of many millions of pianos, motor-cars, bedsteads, mattresses, and all that. It would require the multiplying of the wealth of the country many fold. And, yet, thousands of men are throwing down their tools and asking for more money and less work, thereby hindering the production of wealth. The absurdity of this decision is self-evident.

It would be well for the "working man" to keep in mind that, while wealth is essentially the product of labor, *money is not wealth*, or, it is wealth in only a limited sense. Money represents wealth, serving as a convenient instrument of exchange.

Obviously, the only way to secure the general betterment that the working classes quite naturally, and legitimately, desire is, for the entire country to set about producing the wealth necessary for this purpose. If it is a question, though, of increasing wages all around, that would not improve matters, unless at the same time

there occurred a commensurate increase in production. Otherwise, the purchasing value of the increased wages would not be greater than it was before.

A reduction in the working-hours, however desirable in some ways, might be disastrous, if it led to a diminished output of commodities. After means have been discovered for maintaining production at a high level, by utilizing all natural resources, it will be possible to reduce the number of working-hours; but, at the present, that is not feasible.

All the irresponsible and mistaken demands of strike-leaders, as well as those of the more extreme I. W. W.'s and of the Bolsheviks, must be credited to the evils of faulty education and consequent inability to think clearly. People are being led astray by strangely erratic reasonings, and one looks in vain for evidences of any inspired ideal. There is in the air a spirit of universal grab; an unholy absorption in "self", and, yet, if ever there was a time for moderation, for patience, and for humility, it is now.

Hundreds of thousands of the young men of all nations, the very flower of the peoples, have made the great sacrifice. Questions determining the future of the world are being debated; a peace-treaty has not yet been signed; but, governments are busy at restoring equitable conditions under which the various nations shall be enabled to return to peaceful pursuits. Large enterprises are being planned by industries, by municipalities, and governments, which will give remunerative occupation to uncounted numbers of workers; and, during this difficult time, a precipitation of human perversity declares itself in the blind and foolish manner in which certain labor-elements set about making a turmoil that can not possibly do good, while it may cause a great deal of harm.

The lesson of the labor unrest, especially of its extremes, as manifested by the I. W. W.'s and the Bolsheviks, is, that it demonstrates the absolute necessity of better, sounder, and truer education; not so much education in the sense of cramming a lot of information into the heads of children, but, rather, the true education of the heart, as well as of the mind—an education that convinces men and women of the mutual interdependence of all people, that teaches them that, and how, each one in his sphere of activity is necessary and es-

sential for the benefit and comfort and happiness of all.

The man who demands high wages without giving efficient production—without "delivering the goods"—in return, injures himself and is disloyal to the wage-earning masses. He adds to the cost of the necessities and comforts that he and his fellow workers must buy.

WAR-RISK INSURANCE

The secretary of the Treasury, Mr. Carter Glass, recently published a statement on the subject of War-Risk Insurance and the so-called Compensation, and this well may be reproduced in this place, inasmuch as physicians, especially in country districts, may be asked for their opinion on these matters. Consequently, we print the Secretary's statement in full:

"Considerable confusion and much misunderstanding seems to prevail among the relatives and beneficiaries of men in the military and naval service as to their rights under the War-Risk Insurance Act. Many mothers and fathers named as beneficiaries of the Government Insurance applied for by their sons have gained the impression that they must prove dependency, in order to receive payments of insurance. This is an entirely erroneous impression, probably owing to a confusion of the insurance- and compensation- provisions of the Act of Congress of October 6, 1917, and to a mistaken assumption that the terms 'Insurance' and 'Compensation' are used interchangeably, whereas, they represent two entirely separate and distinct benefits.

"Insurance is payable regardless of any dependency and the beneficiary designated in an application for Government insurance, if within the permitted class of spouse, child, grandchild, parent, brother or sister, is entitled to receive the insurance in monthly instalments, without proving any dependency upon the insured.

"'Compensation,' however, which is separate and apart from insurance and takes the place of the pensions provided under the old pension-system, is payable only to a wife, child, dependent mother or dependent father of a man that is disabled or dies as a result of injury suffered or disease contracted in the line of duty while employed in the active service. Compensation may be payable in addition to insurance, but, a mother or father must prove actual dependency, in order to receive monthly payments of compensation, although they will

receive the insurance in monthly installments if named as the beneficiary thereof, whether they are dependent or not.

"No dependency need be shown by any beneficiary in order to receive the Government insurance; but, a mother or father must prove actual dependency upon their deceased son for the necessities of life in order to receive the additional payment of compensation."

"He has achieved success who has lived well, laughed often and loved much; who has gained the respect of intelligent men and the love of little children; who has filled his niche, has accomplished his task; who has left the world better than he found it, whether by an improved poppy, a perfect poem or a rescued soul; who has never lacked appreciation of earth's beauty or failed to express it; who has always looked for the best in others and given the best he had; whose life was an inspiration, whose memory a benediction."

—Mrs. A. J. Stanley.

EPIDEMIC LETHARGIC ENCEPHALITIS

In a discussion before the Chicago Medical Society, on encephalitis lethargica, the opinion was expressed unanimously by those taking part that this affection was associated with, or constituted a sequel of, influenza. The lethargy or stupor that is characteristic of the malady has led to its being known as sleeping sickness, but this is not a desirable or fortunate designation because of the possible confusion with the sleeping sickness indigenous in Africa (or trypanosomiasis) and in which the infection is intermediated by the tsetse fly.

An editorial writer in the *Journal of the American Medical Association* mentions that profound and prolonged sleep has been observed in connection with many epidemics of influenza since early times. In the epidemic of 1712, for instance, somnolent conditions were so frequent and so marked that in various places the disease was known, even then, as "sleeping sickness". In more recent times, the epidemic following the influenza outbreak of 1889 to 1891 gave rise to a considerable literature, the disease then being called "nona," in which lethargy and weakness were pronounced manifestations.

For several months back, the *Journal of the American Medical Association* has contained not only original articles on the subject, but also abstracts and references to European publications, and the files of this journal may be consulted for details. Of particular interest is a review by the Local Government Board of a report of

an investigation undertaken by the Medical Research Committee and published in a recent number of the *British Medical Journal*. This report forms the basis of an article in *Public Health Reports* for February 21, which, undoubtedly, can be obtained in reprint (U. S. Public Health Service, Washington, D. C.), and also of a special article in the *Journal of the American Medical Association*.

While the most frequent clinical symptoms of this encephalitis are lethargy or stupor and symptoms indicating lesions in or about the nuclei of the third pair of cranial nerve, the prodromal symptoms may be those of almost any acute infectious disease, such as, catarrhal conjunctivitis, tonsillitis, simple sore throat, bronchial catarrh, fever, and so on. The onset is gradual in the majority of cases; early in the disease patients become dazed or stupid, sleeping a great deal, although both Doctor Bassoe and Doctor Patrick insisted; at the meeting of the Chicago Medical Society, referred to, that, despite the drowsiness, the mentality was not always clouded. Indeed, several instances were cited in which the patients, while lethargic, responded readily to questions and gave evidences of being quite alert mentally.

In marked cases, the lethargy is accompanied by heaviness of the eyelids, pain in the eyes (there may be ptosis), blurred vision, photophobia, headache, dizziness and sometimes diplopia.

Another characteristic is the expressionless and masklike appearance of the face. Often the voice becomes nasal and monotonous, sentences being uttered slowly, the words slurred into one another.

In the British report, seven types of cases are recognized, namely, (a) clinical affection of the third pair of nerves; (b) affections of the brain stem and bulb; (c) affections of the long tracts; (d) the ataxic type; (e) affections of the cerebral cortex; (f) cases with evidences of spinal-cord involvement, and (g) the polyneuritic type in which affection of the peripheral nerves is suspected.

The prognosis is usually better than is suggested by the alarming state of the patient. In some epidemics, the mortality was twenty-five percent, which, to be sure, is sufficiently high. In others, it is even higher than that. The duration of the stupor may be from two or three days to several weeks, one case being on record in

which the patient eventually recovered after eight weeks of stupor.

No specific method of treatment seems to be available since it has not been possible to determine any definite bacterial cause. Most authorities agree that the best that can be done is to put the patient to bed, providing him with good nursing and perhaps with transient relief through withdrawal of cerebrospinal fluid. This, however, is not always called for since in certain cases the cerebrospinal fluid was remarkably scant in quantity. One case is recorded in which intensive arsenical treatment was followed by recovery.

Following the example of the English authorities, the Department of Health in Chicago, and in other cities, has made this disease notifiable, and it is highly desirable that all physicians coming in contact with cases suspected of being lethargic encephalitis should report them if only in order to make possible a detailed and comprehensive study of this more or less mysterious malady.

A young man must be careful to reckon a successful father not among his assets, but among his liabilities. For, he who enters his father's profession counting on his father's name, enters at his peril; and his venture is the more perilous, if he takes, in the same profession, the same line.

—“Confessio Medici.”

“DRUGS” DOES NOT ALWAYS MEAN “NARCOTICS”

In the daily press throughout the country there has grown up the somewhat reprehensible custom of employing the word “drug” when narcotic drugs are referred to. In like manner, the laity has come to speak of “dope” when medicines of any kind are meant, although the slang-word “dope” really designates a narcotic drug.

It would be well if physicians were to voice their legitimate objections to this practice, not so much because the misuse of terms is foolish and betrays ignorance, but, more, because of the unfavorable mental impression that is created by the association of ideas in the minds of people. Jack relates that he has been to see a physician for a cold and ‘the Doc’ gave him ‘some dope.’ Physicians know that a prescription of that kind only very rarely would contain a narcotic and that the medicine dispensed either by the physician, himself, or by the pharmacist could in no way be designated as dope. Still, there is the underlying association of dope with

narcotic and the undoubted possibility for harm.

We have before us a reproduction of six newspaper clippings in which the headlines refer to violations of the Harrison Bill and in all of which the word *drug* is featured prominently when *narcotic drug* is meant. We hope that physicians, as well as druggists, will do all they can to bring about a more precise and exact employment of the terms in this respect where misunderstanding might easily arise and where it might have undesirable consequences. Druggists and physicians are doing all they can conscientiously to limit the improper use of narcotics and for this reason they should not be needlessly handicapped by the false impression created in the minds of the public by the misuse of the word “drug” on the part of the newspapers and also by the misuse of the word “dope” by the newspapers and laity alike.

Be glad of the chance to shoulder responsibility—
it develops your backbone.

THE KNITTING NEEDLES ARE MOBILIZED AGAIN

Since the war is over and we can turn to pursuits of peace, an important task confronting us is, to clothe the people, especially women and children, in those countries and regions that were deprived of all their possessions through the international upheaval. All available yarn originally intended for garments for soldiers now is to be utilized for making stockings, mufflers, shawls and sweaters for the women and children who, homeless and half clothed, are trying to gather their courage to begin life anew in the desolated areas they once called home. The Red Cross is appealing to the women of America to help in this important work and to provide clothing for their sisters in European countries.

One of the most urgent duties confronting the Red Cross at the present time is the immediate relief of the desperate conditions of the refugees in the devastated areas of Europe, and for this purpose the Red Cross will conduct a collection of used clothing and bedding during the last week in March. We are informed, however, that contributions may be sent until April 15th and we would urge physicians to call the attention of their clients to this great necessity. All sorts of women’s and men’s

wear and also children's (boys' and girls') and infants' clothing; further, bedding and also money should be contributed as much as possible. Much of this material will be utilized in northern France and in Belgium. Even worse and more desperate, if that were possible, are matters in Serbia where absolutely unspeakable conditions have been discovered. For these stricken people, also, the American Red Cross is asking aid. Clothing that is shipped must be clean, mended, and warm.

DO IT NOW

In connection with the foregoing, we gladly give space to the subjoined request of the American Red Cross:

That shabby suit, your winter coat, the rundown shoes, or any other article of wearing apparel you have discarded, will be as "velvet" to some refugees across the seas. Pack together all idle garments today. Don't wait until tomorrow. Get your parcel started by sending it to a local Red Cross Chapter *immediately*, because it has more than 3,000 miles to travel before it reaches its destination. The Red Cross has agreed to ship abroad 10,000 tons of clothing to the liberated countries of Europe as soon as that amount can be collected. "Over there" men, women and children are in rags, and every delay increases their suffering. Any warm garment that is whole and clean is acceptable. Warm underwear is a veritable luxury to the refugees and hosiery has long been a thing of the past.

Get together whatever you can spare, but, "DO IT NOW!"

Fear is the barbed-wire fence around the garden of opportunity.

SOME FRENCH PROBLEMS

At a meeting of the French Academy of Medicine, reported in the *Gazette des Hôpitaux* (Feb. 1)—which, by the way, resumed publication a few weeks ago, after a suspension of more than two years—Doctor Martel called attention to the fact that, during the past year and at the present time, rabies has assumed an unprecedented frequency. During the year 1918, 411 cases were observed and 61 during January, 1919; while, during the three years of 1913, 1914, and 1915, only 3 or 4

persons had been bitten by rabid dogs in Paris, the number for 1918 was 350, and these were subjected to treatment in the Pasteur Institute.

Rabies was imported into Paris, in 1916, by dogs that had been infected in the Provinces, in cities situated near the channel, or at the front. It has become so frequent in Paris that it constitutes a serious danger, because of the great number of vagrant dogs at large.

There is here another consequence of the disturbed conditions in an otherwise highly civilized country, such as is France. Since the north of France, more particularly those regions invaded by the enemy forces, became largely depopulated, it follows, naturally, that the dogs were obliged to shift for themselves and that they became vagrant. Under such circumstances, an isolated case of rabies might easily give rise to a veritable epizootic, diseased dogs being more likely to be left undisturbed if they followed the inclination of rabid animals, to secrete themselves.

According to a later number of the *Gazette des Hôpitaux* (Feb. 15), the French minister for the liberated provinces has decided that every physician that returns to his before-the-war residence, if that is in a province that had been occupied by the German troops, will be granted a monthly stipend of 500 francs for a period of two years. Furthermore, he will be furnished with an automobile, a side-car, buggy, or other suitable vehicle. Moreover, it has been ordered by the Public Health Department that professional instruments shall be loaned to those physicians that return to their country practice.

In the same number of the *Gazette*, an account of vital statistics in France, is published, which had not been done during the last four years. From this, it appears that, in seventy-seven of the departments, the number of births and of deaths in the civil population had been as follows:

	Births	Deaths
In 1913	604,811	587,445
In 1914	594,222	647,549
In 1915	387,806	655,146
In 1916	315,087	607,742
In 1917	343,310	613,648

The deficiency in male births from 1914 to 1919, using the normal mortality of infants as a basis, is estimated to be 600,000.

If to these figures is added the loss of young men during the war, and which is estimated at 1,400,000 lives, it will be seen that the war has cost France 2,000,000 of potentially useful male lives.

The Faculty of Arts and Sciences, at the University of Strassbourg (the capital of regained Alsace) has instituted practical courses in the French language, which are open to the students of all faculties.

France is taking stock of her assets and liabilities, as they have been shaped through the war. However, she has not awaited the result of stock-taking before doing anything. Everywhere the work of reconstruction is being started, and, besides, steps are being taken to reconstruct the regained provinces and to restore in them French language, French customs and French ways of thinking. One can not but sympathize with France in her almost overpowering task. Yet, its solution will be rendered more easy of accomplishment through the courage naturally belonging to conquerors.

The man who leaves everything to the last minute, won't leave much to his widow.

THE SURVEY OF THE VOLUNTEER MEDICAL SERVICE CORPS

When, about one year ago, the Volunteer Medical Service Corps was organized, for the purpose of securing the services of civilian physicians during the emergency of the war, the opportunity was presented to undertake a survey as a source of information concerning the individual members of the medical profession, and which was found of decided value for the surgeons-general of the army, navy, and public-health services.

With the signing of the armistice, the emergency that led to the formation of the Volunteer Medical Service Corps ceased to exist. Nevertheless, the Council of National Defense was requested to complete the survey, in order that a permanent record of the members of the medical profession might be available for possible future emergencies. The records of this survey are to be transferred to the Surgeon-General's Library at Washington.

Every physician is requested to cooperate with the Council of National Defense, by

returning questionnaires sent out from the Council of National Defense at Washington; or if this questionnaire should not be received by anyone, by writing to the medical section of the Council of National Defense, Washington, D. C., requesting that such a blank be sent, and then promptly filling it out and mailing.

I wonder if true simplicity is ever anything but a by-product. If we aim directly for it, it eludes us; but if we are on fire with some great interest that absorbs our lives to the uttermost, we forget ourselves into simplicity. Everything falls into simple lines around us, like a worn garment.

—“David Grayson.”

CARE OF THE TEETH AND CHILD-WELFARE

The Council of National Defense, although originally created for the purpose of fostering and promoting our war activities, has extended its sphere of influence and proved its value in such a manner as to merit being continued as a permanent institution.

Take, for instance, the Child-Conservation Section of the Field Division. Of course, the movement of promoting child conservation is an entirely proper one, on purely economic grounds, as an appropriate field for the activities of the Council of National Defense. It gains additional importance, since a serious and somewhat humiliatingly large proportion of the young men were found physically defective during the selective-service examinations.

The point of these remarks is, to refer to the recent suggestion, by the Child-Conservation Section, to the state chairmen of child-welfare, according to which lessons on the care of the teeth are to be given by the teachers in public schools. The examination of many thousands of school-children in this and other countries shows that nearly all have dental defects.

The results of these defects are innumerable, the most immediate being, a considerable impairment of the power to comminute the food. If there are too few teeth, or if they are broken, decayed or otherwise unfit for doing the work of chewing, or if they are so irregular that the grinding surfaces do not meet properly, mastication will not be complete, so that the other digestive organs will have to do the work neglected by the teeth.

Digestive disturbances inevitably follow. Many forms of illness result from the

presence, among the roots of decaying teeth, of tiny pus-pockets, which continually discharge their poisonous contents into the blood stream. Furthermore, there is abundant evidence to show that the bacteria of disease, including those of tuberculosis and diphtheria, find lodgment in dental cavities and in irregularities of the teeth. The neglect of proper cleanliness increases the possibility of attack by many kinds of disease.

While all this is rather elementary, it may serve to suggest to physicians just those terms and words that they might employ in teaching their patients to practice suitable care for the preservation of not only their own teeth, but, even more especially, of those of their children.

If President Wilson is sincere about wanting to put an end to secret diplomacy, why doesn't he appoint a few lady ambassadors?

THE BIRTH RATE DURING AND FOLLOWING WAR TIME

In view of the seriously diminished birth rates reported in France, and also in Germany, for the last few years, a passage that we came across in the first volume of Benjamin Rush's "Medical Inquiries and Observations" (second American edition, Philadelphia, 1794, Vol. 1, p. 273) is of interest. Speaking of the influence of the military and political events of the American Revolution upon the human body, Doctor Rush says that "the population in the United States was more rapid from births than it had been in the same number of years since the settlement of the country."

Doctor Rush is disposed to ascribe this increase of birth chiefly to the quantity and extensive circulation of money, and to the facility of procuring the means of subsistence during the war which favored marriages among the laboring part of the people. "But," he adds, "I have sufficient documents to prove that marriages were more fruitful than in former years, and that a considerable number of unfruitful

marriages became fruitful during the war. In 1783, the year of peace, there were several children born of parents who had lived many years together without issue."

The clear-headed effort of yesterday tends always to become the unintelligent routine of tomorrow.

—H. G. Wells.

CHECKING UP THE WOUNDED

When the first transports began to arrive in New York City with the wounded, the American Red Cross was already on the job with a system that has proved itself to be amply adequate to handle the situation.

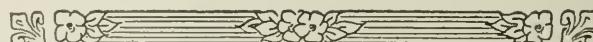
Every day, by mail and telephone, came inquiries regarding some friend or relative who should have arrived while anxious hearts waited eagerly for news.

We are told that information on sick and wounded is handled through the Department of Military Relief in the following manner:

Just as soon as a transport arrives a complete list of the sick and wounded on board is handed to the Red-Cross official at the pier. Four copies of this list are then made; one is sent to army headquarters; one to the casualty bureau; one is retained by the Red Cross and one copy is sent to the hospital director. After the men are sent to the hospitals, each field director checks up the men assigned to his hospital, the news is sent in to Red-Cross headquarters in New York city by messenger, is then card-indexed immediately, one copy being sent to the Casualty Bureau and one copy to W. R. Castle Jr., in charge of the National Bureau of Communications, at Washington, D. C.

For the information of those adjacent to New York city it may be desirable to add the following addresses:

Department of Military Relief, Atlantic Division of American Red Cross, 44 East 23rd Street, Gramercy 5100. Casualty Headquarters, 20 East 38th Street, Murray Hill 10450.



Leading Articles

President Wilson in Paris*

By B. SHERWOOD-DUNN, M. D., Paris, France

Corresponding Member, Société Obstétrique et Gynécologique de Paris; Surgeon (Colonel), Service de Santé Militaire de Paris; Physician to Cochin Hospital, Paris.

EDITORIAL COMMENT.—This graphic account of President Wilson's reception in Paris was communicated to us with other "Letters from France" which are published in the current numbers of The Journal. It seemed to us, however, that it should receive a prominent place among the original articles. Our readers will enjoy this description by an eye witness, an American physician who has lived in Paris for many years and knows France, and the French, intimately.

I WAS witness to the arrival, in Paris, of King George of England, King Albert of Belgium, and King Emanuel of Italy, as well as of many other pageants, during my many years of residence in Paris; but, never have I seen such a wholesouled welcome, such unrestrained enthusiasm, which almost could be called affection, with which the whole city of Paris welcomed President Wilson. Never, since the funeral of President Carnot, have I seen such dense crowds as lined the streets through which the President was scheduled to pass; from curb to buildings, they were packed solid, until locomotion was impossible. I stood in a bow-window of the Army Headquarters on the Champs Elysées, and just opposite that spot the Rue Balsac rises gently up toward the next street; this street was one solid mass of people to the top of the hill, and they could hope to catch only a glimpse of the passing carriages and défilé following. The carriage containing the President came down the curb on my side of the street, near enough for me to have, for nearly a block, a full view of his face, and it was easy to see from his expression that he had rightly interpreted the wholehearted greeting ringing in the voices of the multitude; and he tried, both by the friendliness of his smile and the unrestrained movements of his body and especially his hands, to show them, in return, that he not only appreciated, but, reciprocated their greetings.

I also attended the respective receptions of the monarchs named and that given the

President at the Hôtel de Ville by the city of Paris, and again the enthusiasm for the President almost broke down the bronze rail on either side of the aisle down which the visitors passed between 4,000 invited guests that lined each side of the long splendid apartment. The ladies threw the flowers of their bouquets into his pathway and men stood on the chairs to cheer him and wave their handkerchiefs. Again I was advantageously placed, next the rail, at the end of the aisle, and thus could see the whole 200 feet in length down which the President came, and again his face showed that this spontaneous tribute touched him profoundly.

The palace of Prince Murat, which has been placed at President Wilson's disposal, is flanked on one side by the Parc Monceau, one of the most artistically beautiful and aristocratic of all the Paris parks. The building faces on the street, which has been so constantly crowded with people waiting to catch a glimpse of our democratic President as to require the police and a company of gendarmes to keep open a passage to the entrance. He must, certainly, feel and know that he owns Paris and possibly all France.

President Wilson had carefully reserved Sunday, so far as official or public engagements were concerned. Inquiries as to his plans were met by blank answers, and it was generally supposed that the day was to be religiously set apart for much-needed rest—a course, indeed, urged by his friend and physician, Rear-Admiral Grayson. So well did the President keep

*Delayed in transmission.

his own counsel, that he was enabled to devote the entire day to an object very near to his heart ever since his arrival, that of personally visiting American and French wounded in the hospitals.

Entirely without fuss or feathers, dodging the ubiquitous batteries of photographers and "movie"-men, and steering clear of all ceremony, Mr. and Mrs. Wilson, with Doctor Grayson, presented themselves at half past ten o'clock at the Neuilly Hospital, where 1,180 wounded American soldiers are under the care of Col. J. P. Hutchinson. In the course of the next few hours, the President shook hands, and talked directly, with every individual of these 1,180 men, leaving him cheered and happy. With most of them, he left his autograph in the little book pulled out of the old kit-bag.

It was not at all the perfunctory visit of the usual benevolent personage. Genuine interest was shown in the nature of each wound and how it was received. In addition, the President was frequently observed to bend over a man, whispering very human words of comfort and always assuring him of the nation's gratitude for his services and the warm welcome home that awaited him. Occasionally, a man would burst into tears, when the President would pat him on the back and rally him with a smile and a bright sally. He left each man with wishes for "as happy a Christmas as he could have and the best of good luck."

"How is it that so many men have been wounded in the legs?" asked Mr. Wilson of one man whose right leg had been shot away.

"Many of us were hit higher up, sir," replied the crippled hero, "but, they are not here."

The President nodded gravely and pressed the soldier's hand with a world of understanding in his eyes.

Although the President's coming was quite unheralded, the news of his presence spread like wildfire through the wards. Here and there, the men cheered with all the voice they had and there was a general bustle of excitement. In order to lend dignity to the occasion, many of the men begged the nurses to prop them up in a sitting posture. Observing this, Mr. Wilson told them he would much prefer that they would remain lying down and be as comfortable as possible.

Mrs. Wilson was no less assiduous and kindly in her attentions, and the boys were

greatly interested in seeing her. Said one poor fellow that had lost an arm: "It was worth it all to see and hear the President and Mrs. Wilson today like this."

It was suggested to Rear-Admiral Grayson that the President might be spared the ordeal of seeing the "face-cases in an up-stair ward," but, Mr. Wilson insisted upon going through all the wards, saying, "I am here to see everyone and everything."

The pathetic spectacle of mutilation made a deep impression upon Mr. Wilson. Altogether, although he said little, it was plain that he was deeply moved by this first actual contact with the horrors and havoc of the war.

It was past 2 o'clock when his tour through Neuilly's wards was ended. Lunch-time had come and gone, without a thought, in the absorption of both, Mr. and Mrs. Wilson, in their errand of mercy and consolation. Hurrying back to the Hôtel Murat for a hasty cold lunch, they were off again within the hour to the great French hospital of Val de Grace, where many Americans are being cared for among the French wounded and to which service I have the honor to be attached.

As they entered the ward, a big handsome, bearded poilu, who had been blinded in the close fighting of the big advance in September and wounded otherwise, stood up and sang the "Marseillaise" in a tenor voice of such quality and beauty that Mrs. Wilson declared it reminded her of Caruso.

A big husky infantryman, whose right arm was in a support that held it out at an angle, attracted Mr. Wilson's attention. With his invincible smile, he remarked, as he shook the big fellow's left hand: "Your face is familiar; haven't I seen you before?" "You bet you have!" roared the laughing giant; "I was the traffic cop at the Grand Central in Little old New York before I came over here to get into the big scrap!"

Chatting with a machine-gunner, who had a badly burned hand, Mr. Wilson said: "I can sympathize with you. It's only a few weeks ago that I got my hand so badly burned in getting out of a British tank in the White House grounds that the doctor here (referring to Rear-Admiral Grayson) kept it bandaged for a month."

A badly wounded private gave his name as Thomas Wilson. "I'm proud to be the

namesake of such a brave man," said the President. "It's an honorable name, sir," replied Private Tom Wilson, "and I've tried to do it proud!"

Both Mr. and Mrs. Wilson shook hands with the nurses at each hospital before leaving and complimented them on the excellent care that the patients were receiving at their hands.

This is probably the first intimate touch that the President has had of this war at close view; but, it is only a prelude to the horrible drama that will be brought before his eyes and heart during the trip that he

is about to take to the devastated regions, and it is to be hoped that the authorities may have the foresight to bring before him, also, some of the girls and women, mutilated children, and youths that have been so horribly maltreated by the Huns.

After he has witnessed with his own eyes the wanton destruction and soulless cruelty that has been practiced by the enemy, entirely outside of the war area, he will, I believe, endorse the demand made by Lloyd George that the Central Empires shall be made to feel the relentless hand not of vengeance, but, of stern justice.

After Thirty Years—XII

Notes and Reflections on Life and Work

By WILLIAM RITTENHOUSE, M. D., Chicago, Illinois

[Continued from March issue, page 201.]

Sodium Salicylate in Scarlet-Fever

IN 1893, when visiting the World's Fair one day, I ran across my old friend Dr. Albert E. Hoadley. During our conversation, I happened to mention that I had in care a case of scarlet-fever that was giving me a good deal of anxiety. Said Doctor Hoadley: "Do you know that sodium salicylate is a specific in scarlet-fever? If you will give it a fair trial, you will find a marked decrease in your death rate." I had then been practicing long enough to become a little skeptical with regard to "sure cures" suggested by enthusiasts. However, I had always found Doctor Hoadley so practical and reliable in his suggestions that I felt inclined to take his statement seriously. The more so, because I recalled a case with which I had been familiar several years previously, before I had entered the profession of medicine.

A boy of five years had had a very severe attack of scarlet-fever. The throat-symptoms were especially intense. A sort of membrane formed on the palate and fauces, which was declared by the attending physician to be nondiphtheritic, and which, as I remember it, did differ from a diphtheritic membrane, in that it could be pulled off without leaving a raw surface. I have never, in my own practice, seen a case quite like it. I remembered that this patient had

been given sodium salicylate, and that his throat had been sprayed at frequent intervals with a solution of salicylic acid in water and glycerin. I do not know in what doses it was given nor the strength of the spraying-solution. Notwithstanding the intensity of all the symptoms exhibited, the boy recovered.

So, after due reflection, I decided to adopt the salicylate treatment in a sufficient number of cases to constitute a fair test. The results were such that ever since I have continued to use this remedy as a routine treatment. Twenty-five years ought to be a long-enough period to justify me in reporting results, even though those results have been so striking that I have almost felt afraid that my veracity might be questioned. During these twenty-five years, I have had but one death from scarlet-fever, and, in that case, the patient virtually was moribund when he came into my hands. In the seven years preceding my adoption of the salicylate-treatment, I had, as nearly as I can recall in the absence of an exact record, 15 deaths, besides many cases of serious complications, involving glands, eyes, and ears. It is true that during that time a severe type of scarlet-fever had been prevalent, yet, not much more so than it has occasionally been since then. Under the salicylate-treatment, not only has my death rate been practically *nil*, but, there also has

been a marked decrease in the various complications that make this disease so destructive, such as glandular abscesses, otitis media, nephritis, and so forth. There has not been a lack of severe cases or, rather, of cases that began with severe symptoms; still, under this treatment, the severity of the disease would abate inside of three or four days, while, for the remainder of the time, it would run a comparatively mild course.

Are the Good Results Genuine?

For several years past, I have been asking myself the questions: "Are these good results merely accidental? Is it anything more than a coincidence? Is a coincidence likely to repeat itself during twenty-five years? Can it be because of the prevalence of a milder type of disease?" That, during part of this time, the disease has assumed a mild type, undoubtedly is true; nevertheless, it is also true that, during that period, there have been years in which scarlet-fever took on a very severe character.

One of the first questions the reader will be likely to ask is, whether I have had a sufficiently large number of cases to make a comparison of any value. I think I have. I have no systematic record of my cases, yet, with the help of my ledger, I can make a pretty fair estimate. Making due allowance for the fact that, in epidemics, the number of cases would be very large and in other years very small, and also allowing for the fact that, as I gave more and more attention to my specialty of obstetrics, my general practice decreased somewhat, I estimate that, in the seven years preceding 1893, I averaged 20 cases a year, while, in the twenty-five years since 1893, I averaged 8 cases a year. These figures may be too low; they certainly are not too high. In other words, out of 140 cases treated without salicylates, 15 of the patients died; while out of 200 patients treated with salicylates but one died.

When I began the practice of medicine, scarlet-fever was much more prevalent than it has been of late years. In the seven years previous to 1893, we had two epidemics, and, even when no epidemic was on, the number of cases was large. In one of these epidemics, the disease was of a most virulent and destructive type. In many of the uncomplicated cases, the subject died within the first week, while the complications were appalling. Corneas

were perforated, glandular abscesses were frequent and destructive, and otitis media and mastoiditis left behind them a trail of death or deafness. I recall one family in particular in which three children died in as many weeks. Two of them, little girls of 8 and 10, had a type of glandular abscess the like of which I happily have never seen again; suppuration of the cervical glands was followed by sloughing of the skin and superficial tissues, until the muscles and great vessels of the neck were laid bare. Before they died, they looked as if their throats had been cut from ear to ear.

I have often wished that I had known of the salicylate-treatment at that time, that I might have tested it in such cases as those. In the years since 1893, I never have seen a generally prevalent severity of the disease as intense and destructive as that described above. Nevertheless, I have seen many cases begin with intensely severe symptoms and, after a few days, take on a mild form under the salicylate-treatment and then go on to rapid convalescence. As for complications under this treatment, I can recall only 2 cases of nephritis, 5 or 6 of otitis media, and 1 of mastoiditis. Of adenitis of the cervical glands there have been quite a few cases—possibly 20; still, not one of them has been severe enough to proceed to suppuration.

Now, in view of such results, I can not help feeling that the salicylate must exercise some specific action upon the scarlatina-germ. It does not seem possible that the difference can be one of chance, in view of the uniformity of my results. I should very much like to know whether any of the readers of CLINICAL MEDICINE have had any extended experience with sodium-salicylate in this disease.

Doubtful Value of Present Quarantine-Measures

While I am upon the subject of scarlet-fever, I want to express a doubt as to the wisdom of the quarantine-regulations now being imposed upon the public. They seem, to me, unnecessarily severe, while often they work great hardship upon people that have difficulty in making both ends meet. To compel the breadwinners of a family either to live away from home or to be shut up at home, seems to be uncalled-for, in view of the facts. I do not underestimate the seriousness of this disease and would not willingly endanger anyone's

safety. Still, scarlet-fever is not a very contagious disease, not nearly so much so as are measles and small pox. Many times I have seen one child in a family have the disease and all the other children escape, and this, even, when the family occupied but two rooms, rendering the isolation very imperfect.

My observation has convinced me that, with a reasonable degree of isolation of the patient, those members of the family that do not handle the sick one are not endangering the community by pursuing their usual vocations. If the disease were as contagious as is generally supposed, the doctors would spread it all over the community. It was formerly the belief that the flakes of skin given off in the process of exfoliation were the chief means of contagion. Now, however, the idea is gaining ground that these scales are comparatively harmless, and, rather, that the secretions from the mouth and nose are the principal sources of contagion. This possibly may be the explanation of the success of simple isolation in protecting other children in the same family, and, consequently, should greatly simplify quarantining.

I have often been asked whether a doctor that is attending a scarlet-fever patient can safely take care of obstetric cases. I always answer in the affirmative, without hesitation. I always have done so and have never carried contagion. Of course, it is assumed that the doctor practices due asepsis in the lying-in room and also exercises strict care in dealing with the contagious case.

I have, for many years, made it a rule not to sit down in a scarlet-fever room, nor to allow my clothing to touch the bed or any source of contagion. If I handle the patient, I sterilize my hands before leaving the house. If I use the thermometer I sterilize it myself before I put it back into its case. I do not trust anyone else. For, it is a dangerous instrument in the hands of a careless persons, because it can not be boiled. I have seen a doctor sit down upon the edge of the bed containing a scarlet-fever patient. Also, I have seen a doctor take a thermometer from the mouth of a diphtheria-patient, wipe it on the bed-sheet, then put it back into its case. Comment is superfluous.

Method of Using Sodium Salicylate

As to the dosage of sodium salicylate and the manner of its administration, I have

found that, for a child five years old, 1 grain every two hours is about right at first, and that, as the symptoms improve, the dose may be reduced or the interval lengthened. To a child of twelve years or older, I give 2 grains.

I also have given a good deal of attention to the vehicle best adapted for its administration, because of the repugnant taste of the drug, and also because of its tendency to disagree with some stomachs. I attach a good deal of importance to palatability in prescribing for children.

The psychology of this matter is altogether too often overlooked. If we secure the cooperation of the little patient, if the child takes the medicine cheerfully and willingly, because it has an agreeable taste, it will do more good than under the contrary conditions. When the child is forced to swallow a nauseous-tasting drug, it is likely to look upon the doctor with hate and fear, regarding him as the cause of its woes; and, under those conditions, I question very much whether the value of the medicine is not greatly diminished or even wholly nullified. Of course, this idea may be carried too far; there are instances in which the medicine must be administered at any cost. But, as a general proposition, I find that, when I can get my little patients to like me, to trust me, to believe in me, my results are infinitely better than when I have to contend with fear and dislike.

Therefore, I never expect them to take a nauseous dose, unless it is absolutely unavoidable. So, I am in the habit of prescribing as a vehicle for the salicylate the elixir of lactopeptin, because its color is attractive, its taste is palatable, and it helps to keep the stomach in good condition. If it be objected that we ought to discourage the use of proprietary medicines, my reply is, that I agree with such a rule, provided I can find an official preparation that is equally good. Such a one I have not as yet found to take the place of the elixir of lactopeptin, and I consider the patients' welfare of more importance than consistency regarding a rule of ethics. Ethics was made for man, not man for ethics.

Accessory Treatment

While this is my mainstay in the treatment of scarlet-fever, I add to it anything that seems to be indicated. If the throat symptoms are severe, I add a spray of salicylic acid, glycerin, and water. If the temperature is dangerously high, I prescribe

a few doses of acetanilid, guarded with caffeine. I know that acetanilid is feared by many doctors; still, I have employed it for years, more than any other remedy in the Pharmacopeia. I mean, I have found it useful in a larger number of the diseases, of the kind that are met with in a general practice, than any other single drug; and my results have been good, and nothing but good. I have seen no harm from it, either immediate or ultimate. The safety lies in the moderate dose, and, probably partly in the caffeine. Of course, the doctor who habitually prescribes from 5 to 10 grains of acetanilid at a dose is booked for trouble. It is only a

question of time when he will run up against a patient with an idiosyncrasy, and then he will encounter alarming symptoms that will frighten him so that forthwith he joins in the outcry against the coaltar products. But, such large doses are not necessary. Small doses repeated as required will give just as good results and are perfectly safe. For a child five years old, I never prescribe more than 7/10 of a grain at a dose, to be repeated in two hours, if need be; for an adult, 1½ grains is my limit for the first dose, and 2 grains, if more is indicated.

2920 Warren Ave.

[*To be continued.*]

The Radical Cure of Hemorrhoids

By CHARLES J. DRUECK, M. D., Chicago, Illinois

THERE is nothing in the whole realm of surgery that affords our patient such prompt, positive, and complete relief as a well-performed removal of his hemorrhoids. It is one of our most satisfactory surgical procedures.

Once the tumor has formed, subsequent inflammation will produce a hyperplasia of the connective tissue about the veins, and then there is no possibility of the tumor being absorbed, but, it must be removed surgically. There are some cases of hemorrhoids in which it would be better to operate under general anesthesia, when other surgical conditions simultaneously need to be attended to; however, most hemorrhoids may be satisfactorily removed operatively under local anesthesia, thus entailing but a few days' detention from business, while also eliminating the danger to life, from heart, lung or kidney complications, involved in a general anesthesia, as well as lessening the pain and the danger of secondary hemorrhage brought on by postoperative vomiting. A local anesthetic possesses a distinct advantage in the case of aged, timid or nervous patients.

Preparation of the Patient

The patient is to be as carefully and thoroughly prepared for a hemorrhoid-operation as for a laparotomy. If a cathartic is deemed necessary, an ounce of castor-oil is given twenty-four hours before the operation, so to sweep out septic and decompos-

ing material from the intestine. This cathartic must be given long enough in advance of the operation to allow the patient to get rid of it and for the increased peristalsis to subside. If the patient already has been taking a cathartic daily, the physic, in some instances, may advantageously be omitted, thus avoiding exhausting him. Most patients do not eat much previous to the operation, still, some consider it a last chance for several days and, consequently, unless warned, will gorge themselves. Hence, I request the patient to abstain from meat, vegetables containing much cellulose, and gas-forming foods, and to subsist, for the day before the operation, on broths, cooked pulpy vegetables, and other readily absorbable foods. The patient enters the hospital on the evening before the operation and, if restless, is given 20 grains of bromides, in order to insure sound sleep for the night. That same evening, he is given an enema of physiologic salt-solution, and then is left undisturbed. Early on the morning of the operation, the perianal region is shaved and cleansed and a sterile dressing is applied. Three hours before the operation, the patient is given a one-pint enema. One hour before the operation he is given a cup of soup or else coffee and toast, as it is better not to operate when his stomach is empty. He is given a hypodermic injection containing morphine, 1-4 grain; hyoscine, 1-100

grain; and atropine, 1-150 grain; after which all visitors must leave the room. This hypodermic quiets him and obviates psychic trauma.

The Operation in Detail

My operative technic is the same, whether performed under local or general anesthesia. The position of the patient may be adapted to the individual case. The left lateral prone position, with the hips raised (proctologic position), is satisfactory for the surgeon as well as the most comfortable for the patient, while it prevents the sacroiliac strain that so often is produced by the lithotomy-position. However, some patients breathe more easily in the exaggerated lithotomy-position.

The hemorrhoid having been brought well into view, it is picked up at its upper end with a hemorrhoidal forceps and an incision, beginning in the normal mucous membrane one-fourth of an inch above the tumor, is carried down on the left side of the pile, then, beginning again at this upper point, a similar incision is carried down on the right side of the tumor. The upper pole of the tumor is now lifted out of its base, thus exposing the vessels as they enter the tumor from above.

The vessels now are grasped with a thin artery-forceps and the tumor is cut free.

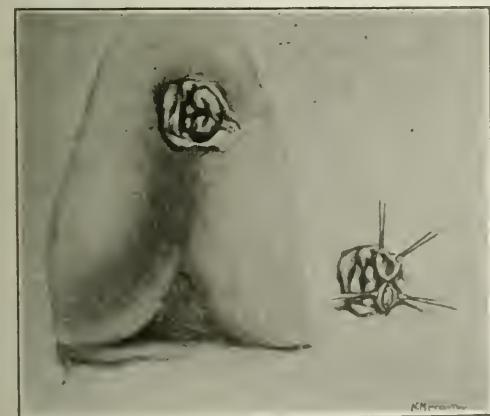


Fig. 1.—Prolapsed internal hemorrhoids.
Small Picture: Enucleating the hemorrhoids.

The lateral incisions are carried down to and around the lower border of the hemorrhoid. These lateral incisions are to be kept close to the hemorrhoid or, preferably, in that part of the mucosa covering the side walls of the pile. The dissection is carried down around and beneath the hemorrhoids down to the solid connective

tissue or fascia about the muscle-coat of the gut, when the pile is shelled out by blunt dissection (Fig. 1). This enucleation of the tumor is almost a bloodless operation.

The pedicle in the grasp of the forceps, at the upper end of the wound, next re-

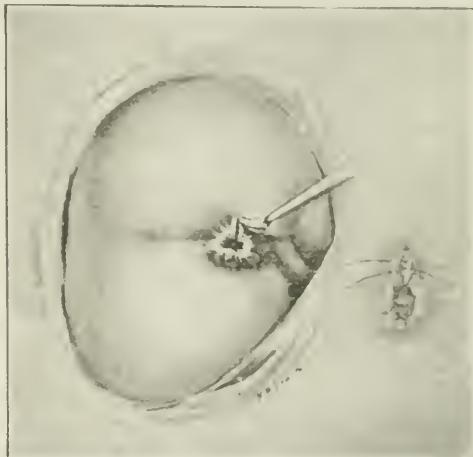


Fig. 2.—Carrying the incision out on the skin to remove an external hemorrhoid.
Small Picture: Sutures placed to close skin wound.

ceives our attention. The size of this pedicle will vary with the size of the hemorrhoid; still, even when the tumor is large and fleshy, the pedicle is slender, because it consists only of blood-vessels and the connective-tissue supporting structures between them. The pedicle now is lifted well up and examined, in order to make sure that it is thoroughly freed from the mucous membrane, then a No. 1 catgut ligature is slowly but firmly tied close down at the base. One end of the ligature threaded upon a curved noncutting needle now is passed through the base of the stump beneath the ligature. The forceps and upper part of the stump are now cut free about one-eighth of an inch above the ligature and the thread that transfixes the stump is tied over the stump and across the encircling ligature, thus preventing it from slipping.

As the stump is released, it retracts well into the bottom of the wound and the mucous-membrane edges fall together over it. It is important to tie the stump carefully, as it is small and, if not properly secured, secondary hemorrhage may result. The wound edges fall together in good ap-

position, still, they should be secured by two small interrupted sutures.

If the tumor is in the anal canal, its lower edge may rest at the white line where the skin and mucous membrane meet. If the tumor is of the internoexternal variety, it is to be removed completely, by continuing the dissection over the white line out onto the skin, taking out a "V"-shaped piece of skin and inflammatory tissue sufficient to restore the anus to a normal appearance (Fig. 2). Lastly, the wound is closed with two interrupted catgut sutures. When dissecting out the hemorrhoid, be sure to leave a clean-cut, smooth-surfaced wound as a ragged wound is more liable to bleed.

Whether the operation is performed under local or general anesthetic, be careful to handle the parts gently; for, unnecessary dilatation of the sphincters as also rapid or rough manipulations and catching with snap-forceps the tissues that are not to be removed will cause more subsequent pain and increase the danger of infection. It is important that any skin tabs be removed at the time of the operation, otherwise they become inflamed and painful.

The operation completed and the field cleansed, the rectum and anus are well covered with sterile vaseline, carefully and freely covering each and every wound. A light gauze dressing is then applied and held in place with adhesive straps. I do not place a tube within the rectum, because I am convinced that it does not serve any good purpose, while it certainly causes the patient intense pain and is one of the active factors giving rise to retention of urine.

When the patient is put to bed, keep him in the Sim's or else in a prone (on his face) position. Do not allow him to lie on his back, because, in this position, the middle and superior hemorrhoidal vessels in their upper portion are in a vertical position; at the pelvic brim, they bend a sharp angle, so that the abdominal contents are superimposed. All of these positions cause obstruction, and, as the hemorrhoidal vessels have no valves, there is a back pressure and a tendency to swelling, a giving-away of the stitches and more pain, as well as delay in the process of repair. After the first day in bed, our patient may turn about and assume any comfortable position.

The After-Treatment

The after-treatment of hemorrhoid-patients is a very exact one, but, unfor-

tunately, often is neglected, with the result that complications frequently occur. Although general standard rules for the post-operative care can be set down, there is much to be individualized in each case. In fact, it is most important that the physician, himself, look after his patients, so far as this is possible; for, just a little slip in the after-treatment may spoil the effect of an otherwise excellent operation.

The degree of pain following any operation depends somewhat upon the temperament of the patient; also, however, to a large extent, upon the procedure and the skill of the surgeon. During the first day, I order hot compresses. Ordinarily, an opiate is not needed; still, there is no harm whatever in administering sufficient morphine, hypodermically, to prevent severe pain following the operation. It is better to give enough morphine to insure complete relief at once, rather than to give smaller doses repeated. For patients of average weight and strength, $\frac{1}{4}$ grain of morphine and $1/100$ grain of atropine suffices; but, in case that does not give relief, this dose may be repeated in one-half to one hour.

The accumulation of gas in the colon frequently is very annoying. When this does occur, urge the patient to expel the gas. If left to himself, he is likely to restrain the desire, for fear that bleeding may occur, consequently, often will spend a restless, wakeful night, when he might have relieved himself, without any possible harm resulting. Possible retention of the urine always is feared by the surgeon; still, when operating under local anesthesia, little difficulty in this direction will be experienced if the patient has been properly prepared and is not too soon disturbed after the operation. Never suggest the subject to the patient nor try to have him void his urine within the first twelve hours after the operation. It is an effort even for a healthy man to empty a partly filled bladder, while, if you wait twelve hours, or until your patient's bladder is filled, he will urinate voluntarily, especially if he is allowed to slip out of bed and use a commode or to urinate while standing.

The postoperative diet for the first day consists of liquids given every two hours: soup, broth, egg-albumen, buttermilk, and cream, 4 ounces of either, with 2 ounces of water. No milk is allowed. On the second day order semisolids; poached egg, toast, custard, rice, sago, absorbable vegetables,

also cooked apple, prunes or other fruit, besides, for beverage, tea, coffee, grape-juice, lemonade, and orangeade. After this, a regulated general diet is allowed.

These patients expect defecation to cause terrible pain, and I presume that their fear acts as an inhibition to evacuation. So, at the end of the second day, I give an injection of 6 ounces of liquid paraffin, using a soft catheter, letting the patient use a commode, instead of the bedpan. Each day thereafter, he is given an enema of 8 ounces of physiologic salt-solution or of glycerin, 2 ounces, and water, 6 ounces. Wet absorbent cotton is employed as a detergent after each evacuation.

When the patient leaves the hospital, his hemorrhoids are cured; however, in many cases, there still remains the effect of long-continued disturbed digestion. Therefore, the patient should be impressed with the importance of the after-treatment, and should receive, either direct or at the hands of his home physician, whatever directions regarding his diet and medication may be necessary.

I never use mercury bichloride during the operation, nor in any of the after-dressings, because this irritant sets up a lasting tenesmus as soon as the sensory nerves recover.

The Advantages of This Technic

These may be enumerated as follows:

1. The operation is thorough and may be satisfactorily performed either under local or general anesthesia. The incised wounds, if carefully coapted, heal more

readily than will crushed or cauterized surfaces.

2. The sphincter-muscles are not disturbed or injured by forcible dilatation, since a speculum is not employed.

3. The ligature is so applied as to hold securely the vessels, so that secondary hemorrhage can not occur, neither is there any sloughing tissue to separate several days later.

4. The stump is small and buried, and the wound edges are closely approximated, so that the resulting scar is smooth and level with the surrounding mucosa, instead of being raised; consequently, it does not obstruct the passage of the feces. It is this raised hard scar left after an operation for the removal of hemorrhoids that, more than any other one factor, tends to induce a recurrence of the trouble.

5. All of the diseased tissue is removed, therefore, recurrence is impossible; yet, enough of the mucosa is left to maintain in good order the tactile sensibility of the anus. This is one of the points of superiority over a clamp- and cautery-method of operation, which necessarily must grasp much tissue outside of the hemorrhoid or else leave part of the varix behind. If a portion of the varicose vein remains, infection and an abscess is prone to occur.

6. The scar of the wound conforms to the axis of the anal canal, thus, can not narrow the lumen of the gut.

7. The postoperative analgesia continues for several days, while the patient is up and out in a few days.

Medicine Socialized*

By CHARLES ELTON BLANCHARD, M. D., Youngstown, Ohio

EDITORIAL COMMENT.—The peculiar problems of the medical profession, social, economic, moral, have occupied many minds and have been discussed, as well as talked about, by many people. We are reminded of the merciless reflections voiced, a few years ago, by Mr. Bernard Shaw, which contained too many uncomfortable truths to permit us to reject his diatribe with a careless remark that nobody took Shaw seriously. Many articles by Dr. Richard Cabot, also, deal with these same questions. We physicians know full well that everything is not as should be. But, what is the remedy? Doctor Blanchard suggests one way of dealing with wrong conditions that, undoubtedly, exist. What do you think of his solution of the difficulty?

FROM earliest historical times, the practice of the healing art has been an important human concern. Its votaries were held in highest esteem, on par often

with that of the clergy and statesmen. At times, the office of priest and physician merged, so that saving the soul and healing the body was a twofold task. Many times, kings have listened to grave political advice and suggestion, sometimes swallow-

*Read before the Emerson Club, Youngstown, Ohio, February 3, 1919.

ing it along with the physic, both equally bitter and equally effective. Who knows what thrones have tottered, with the nation's fate trembling in the balance, all dependent upon the curing of a torpid liver or relieving an obstructed royal colon!

Henry Ward Beecher once said: "Half the spiritual difficulties from which men and women suffer arise from a morbid state of health."

It is not my purpose to deal with the history of medical practice. I am asking you to consider for the moment the present system, its recent developments, and then to outline a system of socialized medical service, and to show, in part, what it could and would do for the world—for the human race.

When I use the term *medicine*, you will, of course, understand me to mean, not only curing the sick by the use of drugs or any other of many physiologic agencies, but, I include hygiene, dietetics, sanitation, and preventive medicine, and last, though not least, surgery.

Surgery, the socalled handmaiden of medicine, once relegated to the leech and the barber, has, in recent decades, taken the position more like that of a dominating daughter-in-law. Indeed, the wonderful success of this department of medicine, success that seems to make it more or less of an exact science, has thrown the regular medical profession into a state of mind that some have characterized as drug-nihilism. This wise do-nothing attitude of many doctors has opened the doors of public thought to doubt and lack of confidence.

Anent the Drugless Cults

Thus the sudden advance of surgical treatment has likewise prepared an easy way for numerous drugless cults, notably that of Christian Science, which latter maintains that all disease results from thinking wrong thoughts, that is, error-thoughts, thoughts out of tune with the Infinite, and it pretends to "cure" everything, from spinal curvatures to ingrowing toenails, by means of prayer and "absent treatments", at two dollars per. Also, socalled Chiropracy, which "discovered" that all, or nearly all, disease, is caused by slight dislocations of the spinal vertebrae. Hence, you only have to have your subluxations corrected, at so much per sublux, and your

disease will disappear. Some of us plain, ordinary doctors have often wondered what particular vertebra is out of place to cause, let us say, an unnamed venereal disease, or, say, that perplexing disease commonly called sugar-diabetes, or that most pathetic state, locomotor ataxia. However, Christian Science, Chiropracy, and other pseudo cults have cured as many cases as have the famous bread pills of the regular profession. All honor, then, to the wonder-working placebos.

But, all this is merely a digression for amusement and not part of our theme. Yet, these things easily justify us in asking, if what they call "medical freedom" and "personal liberty" (the slogans of two great piratical commercial enterprises, the first one, unorganized medical quackery, the second one, the liquor-traffic, happily, soon to be exterminated) are not justified by general public intelligence—or, the lack of it, perhaps I had better say. Also, this state of mind may justify us in saying that, if selling of habit-forming drugs, including alcohol, is illegal, because people are not competent to know what is good for them, then my argument, which is to follow, for a publicly paid medical service is equally justified by all good logic and common sense.

However, before I proceed to this argument, I want to tell you something about the condition in which medical practice finds itself today in the United States.

In spite of more exacting college-courses, which now require a literary degree for entrance, this meaning four years in college after high school, and four years in medical college, with, usually, an additional year of hospital-internship, there are about twice too many doctors. Formerly, a few weeks of "lectures" and a year or so of apprenticeship with some established doctor—reading his books, rolling his pills and cleaning his office-cuspidor—prepared one to hang up the "shingle." Thousands and thousands of poor American boys, during this glorious period of opportunity, shunted over, from the working class—farmers' sons, mechanics' sons, shopkeepers' sons—into a "learned" and privileged profession. When the boy was too honest to be a lawyer and too lazy to be a preacher, he was sent over to old Doctor Pill-bags, to "make a doctor out of him". These grand and glorious days of American opportunity are gone forever! Now,

all that the poor boy can hope for is, to be a politician.

From the early eighties until now, the industrial development has called to its service more and more physicians. Employers discovered at last, that it pays well to take care of their workmen when sick and when injured, just as it pays to take care of mules, horses, and motor trucks. All the mines have the dollar-a-month hospitals, the camp-doctor, the traveling specialists, who look after eyes, ears, and so on. All the mills have the emergency hospitals, the shop-doctor, the surgical staff, and hospital-service.

Because of this peculiar development, our own city of Youngstown has no municipal hospital and is practically helpless in any emergency such as the recent epidemic of influenza. We should have a publicly owned and conducted hospital, open to the entire medical fraternity of the city and operated for service, not for profit, to the institution or to the doctors.

Most cities have, of recent years, given or tried to give efficient attention, through health-officers and sanitary policemen, to all manner of health-concerns. Stateboards of health are locating sewers and solving water-supply problems. The Mahoning river, however, does not seem to give the Ohio State Board much anxiety.

The National Government has its medical and surgical officers for the Army and the Navy, and some of the achievements of these public workers have been of wonderful value. Since the recent World War began, American doctors have done great things, with prophylactic measures, with new agents for healing wounds, by plastic surgery, by new ways of splinting fractured bones. The Carrel-Dakin solution, socalled, seems to be a wonder-worker. Nowhere has the real doctor been found wanting in courage, zeal, skill or patriotism. Nearly 50,000 American doctors braved the perils and hardships of war, and many of them paid the supreme price. When the doctors and nurses of Youngstown now serving in France come home again, they will deserve our best recognition and approval.

Status of the Average Doctor

Now, that we have this brief picture of the situation in mind, what is the status of the average doctor today?

Unless he is in public service, or in the employ of some industry, or holds some

hospital-staff position, or is a specialist with established associations, he is having hard sledding to earn a living. Good authorities assert that the average income of doctors, little and big, is about \$750 a year. I have no way of proving this figure to be correct or incorrect. This is true, however, a doctor in general practice, who might have been a good carpenter, bricklayer, butcher or blacksmith, would have been financially better off had he been content to stay in the working class of physical labor. I once heard a man, looking at a bunch of college boys, say: "They are spoiling a lot of good hack-drivers there, trying to make doctors out of them."

Now, this average doctor of today, out of college ten or twenty years, many of them with a very liberal education before their medical courses, is, after all, a competent man. He knows his pathology and diagnosis, and keeps up with all progress in methods of treatment. Often he has a good outfit of instruments of precision and tools for doing all manner of work. If he is more careful and cautious as he grows older, his very conservatism is a public safeguard. If he manages to stay in the work, he must be competent and able to compete with his fellows; for, each one is after the other's patronage—not openly or unethically, of course, but, by the very nature of the game. The more kindly, ethically, and honestly he plays his humble part, the poorer he is after ten or twenty years of service.

A few are good collectors and couple a little business acumen with their pills and powders, and they prosper in a measure. Some few add a touch of avarice and duplicity, make twice or thrice more calls than necessary where the pay is good, advise unnecessary treatments and operations, have trade arrangements with specialists and surgeons, as well as other ways of swelling the income. Others, bolder, take up all the surgical work they can get, removing tonsils, adenoids, appendixes, and now and then an ovary, or do other things they would not do but for the money-motive. These good men are everywhere and they go speeding about in very modern automobiles on errands of mercy and service. They also wear the togas of the elect in our organized guild and are great sticklers for ethical punctilio. It was very significant that, in many states, it was necessary to legislate against fee-splitting and com-

mission-arrangements—which may or may not have improved things.

Doctors are human children, just the same as the rest of us, and every one of you could, if you would, tell personal experiences in plenty to prove it. The motive behind all this ethical business, cloaked with all the garments of ultrascientific efficiency of conservatism, is the same sort of motive that prompts organized capital in the business world to use its power in politics and courts of law to further its own interests. It is the same motive that prompted the German autocracy to adopt certain forms of state socialism, in order that a false patriotism may be used in a military way to increase the profits of the junker class and extend the Kaiser's dominion. In short and ugly terms, in medicine as elsewhere, it is a game of freezeout, a means for controlling competition, a national conspiracy in restraint of trade.

I know and you know that the average doctor—those good, simple chaps, who go through the motions and think the thoughts they are supposed to think—would resent these statements. It is medical treason to utter them. Yet, when the average doctor balances his books and finds the balance on the wrong side; when he sees people going to the advertising drugless cults, by hundreds; when he knows that more is spent for nostrums and patent medicines than is paid for doctor's services; when he waits long for his pay and often never collects the little that he has earned; all this, and more, easily convinces him that there is something wrong.

What There Is Wrong With the System

Oh, there is nothing wrong with the system for exceptional men, for men like Doctor Crile, the Brothers Mayo, and some others, men that are lauded and applauded in hundreds of newspaper-stories and in other free advertising. Nothing wrong for the little group of specialists in each center, whose system of associates carries to them a nice cash business, on a silver server, as it were. Nothing wrong for the hospital-surgeon that performs from one to a dozen major operations each day, many of which bring extra-large fees. Nothing wrong for the man that can make his name a household word, by being elected coroner, health-officer or something. Now, these men thus marked with favor in the system as a rule are competent men, often the best of good fellows, and are greatly

shocked if any physician or layman has the temerity to criticize the system of medical service with all its glorious traditional past.

However, do you imagine that almost anyone of those average men, men always a little short of funds, a bit seedy and discouraged, would not do as well had he, by any chance, been afforded the opportunity? In fact, have you not noticed that those that have what they call "push"—that is to say, that push the other fellow out of the way—and self-assertion, meaning that they browbeat and bulldoze until people just have to make way for them, that these are the ones that get ahead? This probably is true as to lawyers and preachers, also; I know that it is true for doctors.

Fie on the whole system! It is a relic of the dark ages. One prominent doctor, in a leading medical journal, said: "The present system of medical practice belongs to the stone-age." I say to you, in the face of all our medical laws, medical codes of ethics, and scientific attainment, "It is a system of dog eat dog."

The Wrongs Specified

Now, why do I say this? What justifies it? Let me list a few charges:

First, the financial or economic interest of the patient and of the doctor have nothing in common. Is not it revolting to think that, the longer you are sick, the better off is the doctor? Is not it a dangerous thing that doctors must depend upon the fact that people must become sick and injured in order to make a living? It is as if the state, when granting a medical license, said: "Now, this certificate entitles you to go forth and levy tribute from the suffering public. The more sickness there is, the more reward you will reap. You are to be coworker with Death and Sorrow. The sooner you cure, the less you make. If you practice prevention and prophylactics, teach hygiene and sanitation, give lessons in good health—right eating, right living—you may lack the wherewithal to pay your own expenses. If epidemics and pestilence sweep over the land, for you, it will be an economic blessing."

Of course, the state does not say this in words, still, the system does say this in effect. People should thank heaven that most doctors are better than is their system, and strive in every way to eliminate the need of their own services. On the whole, they forget to collect about one-half

of their rightful charges. The widow of a physician told me that her husband left her an estate the principal item of which was, a list of book-accounts amounting to more than \$40,000, but, of which she was able to collect only a few dollars. "What is the use of paying a doctor after he is dead?" seems to be their idea.

Now, for a second charge:

Medical service based upon the fee-system offers itself only to those able to pay the fee. As Doctor Cabot, of Boston, has said: "The very rich and the very poor now receive the best medical and surgical service. The rich, because they have the money with which to command the best skill of the world. The poor, because these serve as good clinical material in the free clinics and dispensaries everywhere conducted in centers of population."

What did the late Mr. Harriman pay Doctor Crile for telling him that he had an inoperable cancer? What did Mr. Armour pay the great German "bloodless" surgeon, Doctor Lorenz, some years ago, for setting aright his daughter's hips? Was it \$50,000? How many other little children, do you think, there are in the world, with congenital dislocation of the hip?

The great middle class must worry along without much real medical or surgical service, because there is not the money with which to pay for it. Thousands of needful surgical operations are not done, because there is no money to pay the fee.

My neighbor has a little girl having enlarged tonsils. She has the ringing noises in her ears, because the eustachian tube is closed by this enlarged gland. She soon will have incurable catarrhal deafness. Why should thousands of this kind and of other kinds of cases go unnoticed and un-prevented? Because an obsolete system of medical practice stands in the way.

This antiquated system prevents a physician being called before grave sickness has developed, yet, which might have been prevented or aborted if taken in its incipiency. Such surgical cases as cancer and tumor are neglected until successful surgical treatment no longer is possible. No doubt, to untimely and late surgical efforts, can be attributed much of the opposition encountered, among people, to what they call "operations".

The Objectionable Fee-System

I might rest my case here with these two indictments of the present medical system

of practice. The general and personal observations of each one in my hearing will prove the right and truth of my criticism. I must, however, add one more general charge:

The fee-plan of practice blocks the way and prevents a class of men, educated at great expense of time and money, from giving efficient health-service, and degrades their lives into a petty scramble of jealous competition for the sake of making a very poor living.

What is the price that the nation pays for this state of affairs? When the World War called for soldiers, to fill the ranks of the English Army, the youth of English industrial towns enlisted or were drafted. On the whole, they presented such a low grade of physical health and vigor that one medical officer said: "It seems to me that the wage-system of England has bred for us a nation of scrubs." Let me read a few facts from a speech made by Lloyd George, not long ago.

"The standard of health and physique among cotton-mill operatives is characterized as alarmingly low. In one cotton town, of the men between 20 and 30 years examined during March of this year, 57.5 percent were placed in Grades 3 and 4, the lowest grades listed. Of 184 cotton spinners and weavers examined on four days in April, only 57 could be accepted for army training."

"In another north-country city, of 834 youths, 18 years old, examined, 361 were certified for the first grade, 189 in grade 2, and the remainder in grades 3 and 4.

"Of men between 43 and 51, the examination of 2,994 in two towns showed that only 8 percent were free from disability. Varicose veins was one of the chief causes of rejection.

"The examinations of all men in Great Britain last April gave the following result: Grade 1: 55.9 percent; grade 2: 19.8 percent; grades 3 and 4: 24.3 percent. Thus only just over one-half of the men examined in this month were fit for fighting purposes.

Here, in America, so many of our boys were rejected that a reclamation-camp movement was started; but, now that the war is over, it very likely will languish, because it would be contrary to the present system and would be "unconstitutional" or something. We can do great things and can create a great prosperity for war-pur-

poses; but, in peace, we drop back into the old rut again.

A volume of complaint and criticism could be written along this line, going into a thousand and one nasty, heartsickening details and concrete illustrations. I must add one more expression, one of hope that, when eventually the League of Free Nations, now so much in all our minds, is established, as much attention may be given to public health as will be devoted to the prevention of war. War is bad, but, nowhere near as bad as disease. The war, for us, killed 60,000; influenza has killed 600,000. A new war, a few years hence, might kill a few of our sons, but, an infection now breeding in some muck heap of Europe or Africa might spread a new epidemic over the world, so much worse than our recent influenza, that it would kill us all before we had learned how to combat it. A class-mate of mine, returning from ten years of service in Africa, as a medical missionary, tells me that the natives are rotten with venereal and skin diseases introduced along with white-man's Christianity. Trade is not the only thing that follows the flag!

Physical health is the first essential of democracy; yet, among the American working-class, and still less so among the foreigners, few know how to live or are able to live in physical decency. The Church makes a great ado about saving souls; however, the same time and money devoted to human skins—in short, to personal hygiene—would be of far more practical benefit.

A Word Picture of Socialized Medicine

Now, with your further indulgence, I will try to paint a brief picture of Socialized Medicine, or, medical service publicly paid, with all individual profit eliminated.

Today, we have teachers, policemen, postmasters, besides many others engaged in socialized service; yet, who would for a moment maintain that the work done by these public servants can be compared in essential importance with that of public health and physical wellbeing?

Let us, then, in response to public opinion, establish a National Health Department, and make its head a member of the president's cabinet. Let us do this despite all precedent and tradition to the contrary, despite those doctors that might oppose, despite all mossback calamity-mong-

ers that would prate about "political control and party-machines." Let us have national registration for all doctors. The present state-system is absurd, and is controlled by selfish schemes more fully than a national one possibly could be. Already a movement is started to give every doctor that was in war-service a national license, good in any state. This should be done; still, if so, why not accord the same recognition to those that carried on the work at home?

Let us have national and state boards of health, that will organize the medical profession for public service, appointed for fitness and capability, and paid salaries from the public funds, in keeping with the character of the important work to be done. Let these organizations take ahold of matters of sanitation, preventive medicine, and personal hygiene. There should be public instruction in all these matters, school instruction about many health-affairs now neglected. The people should bear tax levies, in order that they may escape sickness and injury, and pay this expense more cheerfully than they now pay doctors for curing them after the harm has been done.

Immediately there will come thronging into your mind a long list of good things that such a service would accomplish. Applied eugenics, revised marriage-laws, research-institutions (the Rockefeller Institute amplified and specialized), so that all original research-work would constitute a public service. Until now, about all that has been accomplished has been done by drug-manufacturing concerns, from motives of commercial profit. But, such motives often have foisted upon us things lauded to the skies, only to prove a disappointment in the end.

While schools and institutions for defectives, both physical and mental, may be necessary now, the future health-service will look to the prevention of unfit and misfits. Some time, and that maybe in the near future, food and room can not be wasted upon those individuals that are of no special value in the world.

The organization of socialized medical service in extension of the work already accomplished will be easy and rational. Each city, town or township will have assigned to its service as many doctors as the population demands. Working in harmony with the whole system, doctors

would be paid to keep people well. They would be appointed because of fitness for the work, and those not able to qualify and those not needed would have to enter some other business—farming, for example. The cry of the world is going to be for more food. Indeed, it seems as if the ghost of Malthus were after us even now.

These public-health servants should be well paid, just as teachers ordinarily are well paid. They would have to make good, or, lose their jobs. Neglect of duty, loss of public confidence and good will, or any conduct derogatory to the welfare of the service would quickly replace any miscreants. Political partisanship should be entirely excluded from the department. After a certain number of years of successful service, the doctor should be retired on a liberal pension, and either be of further use in counsel or be allowed to enjoy his declining years in such pastime as may appeal to him.

I could weary you with a mass of statistics about preventable diseases and untimely deaths. Read the February number of *The Pictorial Review* about 300,000 babies needlessly lost each year. I could arouse your horror and anger by depicting conditions so shocking that you would wonder why we call ourselves civilized. Do

you know about the rate of infant-mortality in our own Youngstown?

When war was upon us, we took control of our youths, and made them serve, at risk of life and limb, for our purposes. We should, as a government, take control of the medical profession and make it do for us what it could and would. I predict that, under socialized medical service, we would quickly solve the control on prohibition of prostitution, the spread of venereal disease, of tuberculosis and other preventable infections. A nation such as ours should be ashamed of an epidemic like influenza and ashamed of our poor facilities for handling it. Its death-list is five or six to ten times our loss in the world war. Full 90 percent of these deaths could have been prevented by proper nursing and hospital service, according to Dr. H. T. Sutton, head of Red Cross work in Muskingum County. We should be ashamed of the percentage of army rejections; of our high infant-mortality; of great areas in the South, where malaria is endemic; of our housing-conditions, yes, right here in Youngstown. As a nation, we should be as ashamed of these things as any individual should be of a boil on the end of his nose or of a lot of excess baggage on his paunch.

[*To be continued*]

How Uncle Sam Cares for the American Soldier

Special Article

[Concluded from March issue, page 210.]

IT has been the custom in the Army to issue beef to the individual organizations in quarters, leaving the butchering to the cooks or to the mess-sergeant. This practice has not been for the best advantage of the men, as it is found that the best cuts—sirloin, porterhouse, et cetera,—often are used as stew-meat, while the poorer parts are served as steaks. It is now proposed that within a very short time the beef will be handled in a central place at each camp. Butchers are to do all the cutting. This not only will enable the best cuts to be used to the best advantage, but, will prevent waste.

The only charges of graft or misconduct in the purchases of food for the Army have

been against sergeants making purchases for individual organizations. Steps have been taken that will stop this unsatisfactory practice. Mess-sergeants will then no longer be permitted to buy food supplies for their companies. This will be superseded by a central control in each camp by a mess-officer who will make all purchases and who will have entire charge of all messing arrangements and preparing all menus. It is intended that he will work in connection with the officers of the Surgeon-General, as it is considered that a nutrition-officer should be consulted in arranging the menus for the camps. The bills of fare under the new method of rationing troops has the advantage, in that it will prepare the troops on this side for the methods

which are in vogue in France. By having a mess-officer to arrange the menus, the Army will have a much better chance to cooperate with the Food Administration in the conservation of food supplies. The new system will also prevent any accumulations in mess-kitchens, as food will not be issued, in any instance, for a period of longer than three days in advance.

In addition to supervising all purchases of food, the Subsistence Division has traced to the seaboard every car of food going overseas. It has guarded against delay and mishap and hungry troops. To forestall any emergencies in France, reserves have been stored there. This reserve supply is large enough to meet any losses at sea or the failure of timely arrival of any cargo. It is estimated that there are on hand supplies in sufficient quantities to last the entire American Expeditionary Forces three months should not a single boatload of foodstuffs be received during that time. There are, also, reserve stocks held in the United States.

Dehydrated Vegetables

To get food overseas, has occasioned not a little difficulty. Every possible inch of tonnage-space has necessarily been given to the transportation of men rather than supplies. To meet the situation, the Subsistence Division has condensed its shipments as much as possible. It has given birth to the dehydration of vegetables in America. Dehydration has long been practiced in Europe and many of their troops are now maintained on vegetable desiccated before the war. The Quartermaster Corps has contracted for 16 million pounds of dehydrated vegetables, much of which has now been shipped overseas. These vegetables are used only in case of necessity, as efforts have been successfully made to secure fresh vegetables in the allied countries. As has been said, the Army is not used for experiments and the soldiers are not asked to eat things that the civilian population of our country does not eat. Great stores of dehydrated foodstuffs are maintained, in order to give the men good wholesome vegetables if the occasion should demand it. No failure of crops or loss of ships can deprive the American soldier of his potatoes.

To further conserve space, square containers are used wherever possible, as there is much waste space between round cans.

The motto of the Army is, to waste nothing. All fruit-canners have received

instructions to save all their fruit-stones, these being charred and used in gas-masks. One camp found by issuing sharp knives and ordering the thin slicing of bread, that 60 thousand pounds of bread were saved in a period of fifteen days. This was done without the slightest privation on the part of any soldier.

The Division has worked, not only to save foodstuffs, but, to conserve metals that are greatly needed in other war-work. The shortage of tin plate throughout the country has made it necessary that other containers be substituted. The Division has not been forgetful of the fact, however that many of its products must go into the front-line trenches, and that everything that by any chance would be subjected to poisonous gases must be absolutely gas-proof. It is found that foods, when subjected to even very mild gas-attacks, absorb injurious poisons.

The Subsistence Division never sleeps. It has officers on duty night and day. An order for 24 million rations, for instance, was received after five o'clock in the afternoon. Within twenty-four hours, the order had been placed for the entire quantity and the work of supply was well under way. Even before the new man-power bill had been passed by Congress, plans were completed, only awaiting definite word from Congress for their execution, which would insure the feeding of the additional millions who are to come into the Army through the extension of the age-limit.

Fitting Soldiers' Shoes

It cost, \$65.51, to clothe an American soldier from head to foot, provide him with a winter and a summer outfit. His initial equipment of shoes alone costs \$14.25. Each year that he is in the service in the United States, he must have three new pairs and every year that he serves abroad it takes four to keep him equipped. The Quartermaster Corps has given a great deal of study to the question of properly fitting the soldiers' feet.

The method of providing the soldier with a proper pair of shoes is not haphazard and is not conducted by guess work. Experts connected with the Quartermaster Corps have lately developed a scientific means to ascertain the length and width of the shoe with which each individual soldier is to be fitted. Every soldier, when he gets his first pair of shoes, gets a pair that fits him. The Quartermaster Corps learns his meas-

urements, not by asking what he wore in civil life or what-size shoes he thinks he needs, but, it takes his measurements on a machine recently devised for that purpose. The soldier puts his foot in a device that ascertains both the length and the width of the shoe. The man puts his whole weight on this little apparatus and, as an officer and a noncommissioned officer observe, a full record is taken of his name, his company, his regiment, size of shoe for each foot, and the size of shoe he previously wore. He is then given a pair of shoes of the size called for by the measuring machine. In this machine, is put a little device by which it is readily discovered whether or not there is any defect in measuring or any human error in the taking of the size. The soldier puts on the shoes with this device inserted, climbs a platform, and runs down an incline of 30 degrees, striking the heels of his shoes on pleats especially nailed on the incline for this purpose. If the little instrument placed in the shoe does not make itself felt and the shoe on a very close examination of the head officer is found to be satisfactory, the man is fitted with a pair, and then the correct size is added to the service-record.

The full list of the soldier's wearing-apparel and the cost of the same is as follows:

Breeches, trs., wool.....	\$ 6.32
Breeches, trs., cotton.....	1.69
Caps, winter	1.25
Caps, overseas	1.00
Coats, cotton	1.96
Coats, denim	1.71
Coats, wool	9.79
Drawers, summer60
Drawers, winter	2.10
Hats, service	1.75
Gloves, leather, heavy.....	1.05
Gloves, wool80
Jerkins	6.75
Leggins, canvas92
Puttees, spiral	2.25
Shirts, flannel	4.06
Shoes, field	7.50
Shoes, marching	6.75
Stockings, heavy60
Stockings, light35
Trousers, denim	1.61
Undershirts, summer60
Undershirts, winter	2.10
 Total	 \$65.51

The standards which prevail in selecting these articles of equipment are set forth in an address delivered by Mr. Robert J. Thorne, assistant to the acting Quartermaster General on July 29 at a conference

of the Clothing and Equipage Division of the Quartermaster Corps at New York City, in which he said:

Great Care in Buying

"The thousands of articles furnished must be of one standard grade—the best: Equipment is selected by boards of officers, by test in the field, by laboratory studies, by research bureaus, and such equipment is carefully described in written specifications, and sealed samples are preserved to maintain by comparison the high standard sought for. Every thought has been given to provide the exact article needed.

"The principal essential to success in obtaining articles of merit is to change the adage 'Let the Buyer Beware!' Issue the command: 'Right About! Face!' Now what we have is 'Let the Seller Beware!' This means that the responsibility for the proper safeguarding of Sammy is on the man who sells the goods. He must assure himself that his raw materials are good (Chemists may be needed to do this); he shall attend to his shop conditions so that proper inspection shall be made. In short, he must so conduct his business that he shall not render to the Government imperfect articles.

"In the future, whenever any inspection of a shipment develops a percentage of rejections beyond that normally due to the frailties of mankind, then the Government will reject the entire shipment, permitting the contractor to sort the good from the bad and resubmit the good. Furthermore, in such instances, the Government inspection on such re-submissions shall be as rigid as possible, as it is the judgment of the Quartermaster General that the case is, to say the least, suspicious of fraudulent intent.

"Contractors must be cautioned and made to realize their responsibility, and, so as to remove any doubts as to the dividing line between good and bad contractors, let us define to what extent human frailties can appear and still be classed as normal errors. It is the judgment of the Quartermaster General that any tender of fabricated articles in which two percent or more of the total is rejected, is open to suspicion, and any tender at all of food not up to the standard is regarded as negligence of the worst kind, and the same will be investigated.

"The business of this country today is war, and the strict honesty of every con-

tractor to the very extreme is insisted upon by the Quartermaster General. Inefficiency that causes the death of a son is, from a father's viewpoint, dishonesty. Fortunately, the inspection system has prevented any considerable quantity of rejected items to slip through to the troops.

Enormous quantities of all of the articles required to clothe and equip the army have been purchased and delivered. On July 1, the Quartermaster Corps had 2,710,830 blankets on docks in the United States awaiting shipment abroad. Similarly situated on the same date were: 697,414 woolen breeches, 203,648 pair hip rubber boots, 713,200 overseas caps, 843,564 spiral puttees, 709,850 overcoats, 1,424,245 field shoes 7,508,936 pair of stockings, and, similarly, large quantities of other supplies.

The Low Death Rate of the U. S. Army

The United States army not only is the best-fed and best-equipped army in the world, but, it is also the best-paid and the healthiest army. As Secretary Baker said:

"The best health-record ever attained until now by any army in the history of the world was that attained by the German army in the Franco-Prussian war, when their death rate from disease—just disease alone—was 25 per thousand per year. That was the best record in the history of the world at war. Now, our own history in the Civil War is not known for the Confederate side. For the Northern side, it was at least twice that of Germany's. In the French army, during the Franco-Prussian war, it was very much higher. My recollection is that it was 72 per thousand, due chiefly to the fact that the French Medical Corps was largely volunteer. In our Spanish-American War, the death rate in the American Army—and that even we thought was pretty bad—was only 27 per

thousand per year, and which but for the record of the Germans in the Franco-Prussian War was the best, and the equal record of the Japanese in the Japanese-Russian War was the best in the history. But, in this war—keep in mind 25 as the best yet attained as the basis of comparison—the death rate from disease abroad and at home in the American Army is 8 per thousand. A little less than 8 in France, and a little more than 8 at home. Not perhaps because of less care of the sick here than in France, but, because the new men are brought into the camps here before they have learned camp-sanitation, some of them bringing infection that proves fatal before they are properly cared for."

The present soldier in the United States Army received base pay at the rate of \$1 per day. This is ten times as much as the German soldier, nearly three times as much as the British soldier, twenty times as much as the French soldier, and from fifteen to twenty-five times as much as the Italian soldier receives. The base rate of pay of the American sergeant is \$1.27 per day, which is twice as much as that of a British sergeant, more than six times as much as that of a French sergeant, and between three and four times as much as that of a German sergeant. The General in the American Army—which is the rank of General Pershing—receives base pay at the rate of \$833.33 per month, which is more than twice that of a German General and not quite twice as much as that of the French General, but it is less than the base rate of pay of a general in the British Army, namely, \$1,380 per month. A Lieutenant-general in the British army gets in the American Army gets \$750.

Below follows a complete table of base rates of pay referred to.

Base rate of pay per day of enlisted men of

	United States	Great Britain	France	Italy	Germany
Private	1.00	.36	.05	.02-.04	.10
Private (First Class).....	1.20	.50	.085	.05-.10	.25
Sergeant	1.2727	.64	.20	.40-.80	.35

Base rate of pay per month of Officers

Second Lieutenant	141.67	39.00	60.00	30-60	30
First Lieutenant	166.67	48.00	70.00	40-70	38
Captain	200.00	86.00	80.00	60-90	90
Major	250.00	115.00	90.00	80	130
Lieutenant Colonel	291.67	135.00	165.00	95	170
Colonel	333.33	145.00	142.00	136	176.50
Brigadier General	500.00	400.00	200.00	160	203
Major General	666.67	525.00	300.00	190	260
Lieutenant General	750.00	850.00	—	240	267
General	833.33	1380.00	490.00	—	357

Is Epidemic Influenza of Bacterial Origin?

An Etiologic Survey

By ALBERT J. CROFT, M. D., Chicago, Illinois

IT is a well-recognized fact that, since life was created on this earth, the phenomena of epidemics have always been in close relation, occurring at certain intervals, and have always been the factor in causing marked reductions in the world's population.

The Effect of Geologic and of Biological Cataclysms

Are they disturbances that mark the closing-time of a certain type of civilization or of a certain type of man, just as upheavals of the earth have marked the closing date of various ages?

That an epidemic is of value to human progress, remains to be seen. Geologically, however, the good is evident. The revolutionary changes that have occurred in the bosom of the earth, from Archæan to Cenozoic times, through the various ages, have always been followed by progressive changes in the surface of the earth and the replacement of one type of life by some other; hence, we have the age of invertebrates, fishes, amphibians, reptiles, mammals, and, alas! of man.

Throughout the ages, primitive animals and plants have been continuously wiped out, always to make room for more-highly developed species. This process of elimination has been owing to mechanical, chemical or thermal means, while, more recently, it is asserted that bacteria have been found in fossil remains; so we may say that even they contributed to the good work.

I am not sure, however, that, after an epidemic, after a wiping-out of a great number of human lives, the new generations of replacement have been endowed with any special gifts that would characterize them as more highly-developed species. Consequently, I am not inclined to accept the evolutionary changes of nature as a grade of progress when applied to ourselves, but, rather, to consider such changes as always abnormal. Let every man live the life of his arteries. The doctrine of "let nature do the work", as advocated by

some of our public-health officials, does not appeal to me.

Epidemics have occurred in past ages, just as they are occurring today. In pre-bacteriologic times, should a physician have dared to associate a living organism with disease, he would have been considered a lunatic, a fanatic, a criminal, and, probably, have been condemned to death.

Conflicting Views of the Etiology of Epidemic Influenza

In these days of the microscope and bacteriologic technic, ideas have changed, and we find the conditions reversed; we only think of bacteria, and a physician that associates a disease with anything but bacteria is said to have lost his "ball-bearings." How, then, will the future medics look upon us? Well, probably just as we, of today, look upon the members of the past generations. For, they undoubtedly will entertain some new fad.

The various reports regarding the etiologic factor of the present epidemic, which I am about to summarize, and the extensive efforts made by the various investigators to find a germ to suit the occasion have already resulted in accusations against the streptococcus, pneumococcus, micrococcus catarrhalis, and a few others, thus leading to a world of confusion and chaos.

The designation "influenza", which means "influence", was adopted by the Italians in naming a disease occurring in epidemic form during the year 1743; and since that time many epidemics have been placed under the ban of the "influence."

During the pandemic of 1890, that of a disease similar in nature to that of the Italians of 1743, and which also was called the "flu", Pfeiffer's exhaustive investigations into its cause resulted in the discovering of a small coccobacillus, and which was generally accepted at that time as the etiologic factor. And, we have been taught since then to associate this organism with a particular train of pathologic phenomena, that is, a specific disease—Influenza. This organism, which was found in the sputum and on the surfaces of the respiratory tract

*Read before the Douglas Park Branch of the Chicago Medical Society, January 21, 1919.

in a large percentage of the victims, seemed to have settled the question of the bacterial nature of influenza. However, the acceptance of the influenza-bacillus as the causative factor of the present epidemic is meeting with considerable opposition.

Little, Garafalo, and Williams¹, Canadian Army Medical officers, in making examinations of smears and cultures of sputum and exudates from the upper respiratory tract in cases during this epidemic, report that the most important and constant organism found was, a small coccus which, they considered, in many respects resembled the streptococcus. Gotch and Wittingham² reported the presence of a "Gram-negative" coccus not unlike the micrococcus catarrhalis. They also report finding the influenza-bacillus in about 8 percent, and a bacillus having similar characteristics in about 62 percent, other bacteria, such as the pneumococcus and streptococcus, being present. Because of the constancy with which those "Gram-negative" cocci were found, implantations were made on the pharyngeal membranes of healthy persons, and they assert that symptoms of influenza had occurred in two of the subjects. These results led them to conclude that this Gram-negative coccus is the cause of the present epidemic.

Averille, Young and Griffiths³, also English investigators, on the other hand, report a very high percentage of bacillus influenzae in smears from sputum, with a "Gram-positive" diplococcus predominating. The English investigators, however, seem to be chiefly concerned about discrediting the work of Pfeiffer and of other German workers; for, in France, *The Weekly Bulletin* of the A. E. F.⁴ makes the following supportive statement:

"This disease, which was mentioned previously as 'three-day fever,' is now known to be owing to the true Pfeiffer bacillus, although evidently of a much milder strain than the type that prevailed in the pandemic of 1889. However, Gruber, Friedman and Kolle⁵, of Germany, failed to find the bacillus influenzae.

¹Little, T. H., Garafalo, C. J., and Williams, P. A.: *Lancet* (London), 1918, 2, 34.

²Gotch, O. H., and Wittingham, H. E.: *Brit. Med. Jour.*, 1918, 2, 82.

³Averill, C., Young, G., and Griffiths, J.: *Brit. Med. Jour.*, 1918, 2, 111.

⁴Quotations from *Weekly Bulletin*, A. E. F. (France), in *Jour. A. M. A.*, Oct. 5, 18.

⁵"Bacteriology of Spanish Influenza"; Gruber, Friedman, and Kolle, *Lancet* (London), 1918, 2, 177.

⁶Keegan, J. J.: "The Prevailing Pandemic of Influenza"; *Jour. A. M. A.*, Sept. 28, 1918, p. 1051.

In America, Keegan⁶, of Boston, reports that he found a very high percentage of the bacillus influenzae among soldiers and sailors. These high findings seem to have received support since Park⁷, of the New York health department laboratories, also asserted to have found a high percentage of them. As the disease spread westward and in the various camps, we find that the highest bacillus-influenzae findings were reported by Tonney⁸, of our Chicago health-department laboratories, who found 12.4 percent in the sputa; while Nuzum⁹, of the County Hospital, found the bacillus-influenzae in 8.7 percent, he contending that the pneumococcus was the predominating organism. Strauss and Bloch¹⁰, of Michael Reese Hospital, reports 5.5 percent, while Friedlander¹¹, working at Camp Sherman, found the predominating organism to be the pneumococcus in 53 percent of necropsies; hemolytic streptococcus in 47 percent, while bacillus influenzae was not found more frequently than prior to the epidemic. Hirsch and McKinney¹² hold that the bacillus influenzae plays no important role in the epidemic. Then Lord, Scott, and Nye, of Boston¹³, support this statement

O'Connor¹⁴, working with sputa from a large number of selected cases, failed to find the influenza-bacillus in pure cultures. Then, Synnett and Clark¹⁵, working at Camp Dix, made this significant statement: "It is, by no means, certain that the bacillus influenzae of Pfeiffer is the original infecting organism. We have not found it in pure culture in any of our cases examined post mortem."

The Pfeiffer-Bacillus Discredited

From the bacteriologic findings, one would conclude that this epidemic either is not a true Pfeiffer-bacillus epidemic, or that the present disease is an entirely different one.

It is evident that, if any one specific organism is connected with the disease, it

⁷Park, W. H.: *N. Y. Med. Jour.*, 1918, 108, 621.

⁸Tonney, F. O.: "Report on Chicago Epidemic." *Health Dep't Bull.*, Educat. Ser. No. 15, p. 42.

⁹Nuzum, J. W.: *Jour. A. M. A.*, Vol. 71, No. 19, p. 1562.

¹⁰Strauss, S., and Bloch, L.: *Jour. A. M. A.*, Vol. 71, No. 19, p. 1568.

¹¹Friedlander, A.: *Jour. A. M. A.*, Vol. 71, No. 20, p. 1563.

¹²Hirsch, E. F., and McKinney, M.: *Jour. A. M. A.*, Vol. 71, No. 21, p. 1735.

¹³Lord, Scott, and Nye: *Jour. A. M. A.*, Vol. 72, No. 3, Jan. 18, 19.

¹⁴O'Connor, H. L.: *Jour. Clin. Med.*, through *Ill. State Med. Jour.*, Jan., 1919.

¹⁵Synnett, M. J., and Clark, E.: *Jour. A. M. A.*, Vol. 71, No. 22, p. 1816.

still is entrenched so as to defy the efforts of our scientists. Many kinds of organisms have been found, in large and in small percentages.

Are we, then, to infer from this that all of these organisms, many of which have a normal saprophytic existence in our throats, all at once become pathogenic, and that, combined, they produce the symptom-complex of the present epidemic, or is there some chemic or other influence that has changed the saprophytic environment, so as to permit all these organisms to assume an altered state?

Investigators everywhere are agreed that these organisms play only a secondary role in the production of the pathologic changes in this disease and, probably, are responsible merely for the terminal infections.

So, then, it clearly is within reason to assume that the causes that changed the normal environment of these organisms in the throat may have to be sought in the realms of physics, geology or chemistry, and are not merely a subject for the bacteriologists.

The question as to the primary conditions that have changed these environments may not find a solution in organic life, but, probably, will find expression in these sciences.

All Investigators on a Wrong Track

It plainly is evident that during this epidemic investigators have devoted their entire time to trying to associate some bacterium with the disease; no one, however, has given the subject of a primary nonbacterial cause a thought.

The reports from some parts of Europe show that the influenza-bacillus seldom was found and that the predominating organisms were, the pneumococcus, streptococcus, and micrococcus catarrhalis, while in the Army abroad Pfeiffer's bacillus was considered the cause of the disease. The American reports also give the influenza-bacillus greater credit. One significant reminder is, that this latter organism was a constant feature of the epidemic of 1890, while, in the present epidemic the reverse seems to be the case. The influenza-bacillus has been overshadowed by other germs that played no part in the epidemic of 1890.

It is evident that, if the disease is the influenza of our school-days, it is not caused by the bacillus accused, and that, if it is the same disease that occurred in 1890,

the association is obscure.

Not Bacterial, but, Probably Physicochemical in Origin

I have not been keen in accepting the theory of the bacterial causation of disease as regards this present epidemic, and for two reasons; namely:

1. Because of the extreme rapidity with which it has spread all over the globe at a time when ocean-going traffic was virtually at a standstill.

2. Because of the nature of the disease, which appears to assume the characteristics of some chemical poison. Indeed, it may be likened in many ways to caisson-disease.

You will agree with me that fever is not a constant sign, while headache, dizziness, tainting, nausea, vomiting, and pains in the extremities are more or less characteristic. It seems that the cause, whatever it may be, has a direct action upon the respiratory tract, there being hemorrhage.

A very significant statement was made by the British Medical Research Committee¹⁶, regarding the spread of the disease. "Epidemiologically," they say, "the extreme contagiousness of the disease was proved to be owing to its aerial convection, namely, by means of the 'drop-infection' from persons to person, and not, by transportation of the virus through the air at large, through winds." From this, we may infer that direct contact, more or less, is the factor.

Coutant¹⁷ states that, so far as can be determined, the epidemic began in Manila. This opinion is based upon the statements of Castellani and Chaliners, that pandemics of influenza mostly have started in the Far East. He further says: "All of the reports and rumors of influenza occurring elsewhere, that have come to my attention, have placed these outbreaks at later dates than the one at Manila, with one exception: Between 30 and 40 cases of influenza, with at least one death, occurred on a United States Army transport, which left San Francisco shortly before the epidemic in Manila."

Even Vegetation and Animals Affected?

In my preliminary article, I made mention of the fact that even vegetation had suffered, and now come reports from the Canadian Wilds that the game in that region is suffering from a disease similar to

¹⁶Abstract: British Medical Research Committee, from *Jour. A. M. A.*, Vol. 71, No. 19, p. 1573.

¹⁷Coutant, A. F.: *Jour. A. M. A.*, Vol. 71, No. 19, p. 1567.

that occurring among the human beings, the animals were found to be in a weakened condition, unable to resist the hunters, and the lungs of those killed were found to be congested. Of course, the disease observed by hunters may be analogous to the disease occurring in domestic animals known as equine influenza, pinkeye, catarrhal fever, and mountain fever.

Sheepherders in Montana, who are practically isolated from civilization, as a rule, not even receiving the newspapers, are reported to have rapidly fallen victims of the disease. So, also, baboons and other animals are said to be suffering and dying from the disease in South Africa.

Bacterial Cause Unknown

It clearly is evident that the various bacteriologic investigations conducted abroad and in this country, in regard to the etiologic factor of the present pandemic, have resulted in such a division of opinion that we may conclude that the bacterial cause of the present disease still remains an unknown quantity. This may be either because of inadequate knowledge, on the part of the bacteriologists, in attaching the blame to one of their favorite "bugs," or, that the present epidemic of the disease of the respiratory system is caused by conditions that as yet are unexplainable and probably nonbacterial.

The organisms that have been isolated from the various excreta have all proved conclusively that they were responsible for the secondary, terminal, infections; but, what about the primary excitant? To say, that it is attributable to a filterable virus or to some organism yet to be discovered, is not reasonable.

In considering the causes of disease, if we were to place as much emphasis upon geologic and chemic influences as we do upon bacteria, it is probable that we should find the condition—say, some atmospheric change—that would explain this widespread pandemic.

In my preliminary article, I referred to the socalled epidemic influenza-disease as probably owing to a highly irritating, high-density gas occurring in the atmosphere; although I had performed no scientific investigations to prove my theory; except offering suggestions about the nature of the gas, which was investigated, and the kind of atmosphere that I had observed.

I wish to say, here, that I am of the opinion that all bacterial diseases really are

only secondary diseases and must depend upon some primary factor, and that bacteria, as an organic entity, can do no harm, unless the conditions of the body warrant their multiplication. That they live on our skins, also, that they are present on the mucous membranes of our respiratory system, nobody can deny; and who can say that we do not also carry filterable viruses in these locations?

The Really Worthwhile Problems

So, then, the question of a germ or a filterable virus does not concern me at all. The questions that I should like to have settled are: "What are the conditions that occur at certain intervals and which make these organisms virulent? What are the conditions that favor these germs to enable them to incite an epidemic? Even if we did find a suspicious organism in this epidemic and labeled it as the cause, as Pfeiffer did in the epidemic of 1890, should we be able to explain its appearance?

In conclusion, I wish to say that more thought and study should be given to those influences that render our normal living-environment favorable for growth and development of pathogenic bacteria. We must discover the lesion in this epidemic that has permitted them to secure such a firm grasp upon our system.

A great deal, probably, would be accomplished if geologic, chemic, and meteorologic surveys were made, in conjunction with bacteriologic examinations. We must discover the causes that tend to undermine our systems and to make us susceptible to bacteria.

DISCUSSION

DR. TICE: During every epidemic or pandemic, unusual opportunity is presented to apply the newer methods of investigation and to advance our knowledge. The present pandemic, the most extensive known in medical history, is not an exception. It is not unreasonable to expect that much might be accomplished and many of the problems associated with great pandemics made clear. Apparently, the very reverse has occurred, at least, in more than one respect. One of the acknowledged achievements in the '89 and '90 pandemic was, the isolation and demonstration of the Pfeiffer-organism. So far as one can judge, in the present pandemic, this organism has played only a minor part. In fact, there is good reason to doubt whether it has had any etiologic influence. The laboratory-reports are so conflicting that some doubt has occurred as to the true causative factor.

At the present, it would appear that the Pfeiffer-organism has been quite generally

discredited, and, while many others have been found, no specific one has been demonstrated. This, however, does not constitute sufficient ground to discard the idea about the infective nature of the disease. To do so, would be a step backward. At the same time, it can hardly be denied that many contributing factors are, in all probability, present.

Before the days of bacteriology, much emphasis was placed upon climatic, atmospheric, and similar conditions as factors. The history and reports of the previous similar pandemic are filled with just such observations. Even the name influenza is a relic of the previously accepted belief, that the disease is produced by the influence of cold.

The name influenza was first employed, in 1743, by Pringle and Huxham, being derived from the Italian *influenza di freddo*, that is, influence of cold or, influence through atmospheric phenomena. To accept such a view at present no longer is possible, except to the extent of indicating a contributing factor. [Friedberger recently stated that the name "influenza" originated from the expression *ab occulti cocli influentia*, used by the Greifswald physician Calenus in 1597. —Ed.]

Variation in the type of organism, as well as the degree of virulence, difference in the body's culture-medica, the variable amount of immunity, as well as the numerous contributing external factors, probably must account for the markedly "protean" manifestation of the present pandemic.

DOCTOR PATERA: I have had to treat my share of the cases during this epidemic, and I wish to say that, while everyone was discussing one thing or another as to its etiology, I attended in the good old-fashioned way to the treatment of those that came to me. While I neither believe nor disbelieve in the various vaccines that have been exploited during this epidemic, I did not use any of them, and the results that I obtained with my commonsense therapy were very gratifying. As Doctor Croft has said, everybody has given attention to the finding of some "bug." If this disease is caused by a "bug," it must be some "bug." I should like to see it, so that I could take my hat off to it.

DOCTOR CHVATAL: I am glad to be present here tonight. The idea that this condition is owing to some irritating substance in the air has been one that long has been in my mind. However, I wanted to hear someone talk about it, so that I might be convinced that I really had sensed something in the air. Doctor Croft's theory about a gaseous irritant floating about in the atmosphere, like those which at times originate in the stockyards, seems a very plausible one. I really do believe that someone should seriously undertake to investigate atmospheric association with epidemic disease of the respiratory tract and inform us about any possible abnormal properties that it may possess during these epidemics. A

germ, in my opinion, is harmless, no matter how pathogenic it may prove, unless something paves a way for its proliferation.

DOCTOR GRAVES: I wish to say that Doctor Croft's remarks were decidedly sane, if not, indeed, correct. I think there is real value in this line of thought. What the real truth is and what part the germs play in the disease or the diagnosis, I do not know. There are many of these considerations that furnish hypotheses that produce results. The same as in chemistry. I, personally, can not help but feel that the present epidemic is induced, largely, by some kind of irritating agency. There may be something in the condition of the atmosphere that has diffused the disease.

I had under care several families to which members of the Great Lakes camp brought the disease. There also are a number of people from the South that left the camps, came home on the trains, and became ill. Those patients, my idea is, became affected, not, infected, while riding in the train. The epidemic of grip thirty years ago, as we all know, was followed by repeated fresh outbreaks.

DOCTOR AUBERBACH: The present epidemic seems to change according to the weather conditions, as by, say, fogs. I have noticed that the influenza-epidemic has been particularly severe during the foggy weather in Chicago during the last few months. Will some one suggest a reason for this change?

DOCTOR HAWLEY: When I came this evening, I felt sure that Doctor Croft would give us something to think about, and I am not disappointed. The Doctor speaks of influenza of 1889 in connection with that of this past year. I do not know about the epidemic of 1889 in this country, as I then was studying in London and saw some of the cases over there. The epidemic of that time, so far as I can remember, was entirely different.

DOCTOR YERGER: I want to congratulate Doctor Croft upon his paper, which reviews the etiology of this epidemic. I must admit that I know nothing about it. In fact, we all know but very little and nobody as yet has told us what the guilty microbe really is. I do not agree with Doctor Croft, though, that this is not an infection. I am not a bacteriologist; still, I know that there are several unexplainable facts that make me feel that it is an infection. As to the weather, I have observed that the number of cases increased when it was foggy and damp.

DOCTOR O'CONNOR: The Doctor states in his paper that the chief concern of the English seemed to be, to discredit the work of German investigators. I say, that he is guilty of the same sin when he says that he does not believe in the bacterial theory. As a bacteriologist, it is hard for me to understand people that can not see things our way. I presume, though, that the same condition applies to the chemist, the surgeon, the therapeutists, et cetera, and must admit that therein lies our greatest mis-

take. There are men in Germany that could talk about the quality, composition, and uses of aniline-dyes all day without making serious inroads into their stock of knowledge, and, to study any other branch, in the minds of such men, would be treachery to the cause. That is, probably, our own trouble. We have been studying only one angle of the etiology.

I agree with the Doctor that something must precede the germ and prepare its way. I may, incidentally, add, however, that the toxin of a germ if highly virulent even when excreted in small quantities, and, in certain individuals, may be the forerunner, lowering the vitality and thus producing the favorable conditions required for the vigorous development of the invading organism; still, the individual first must harbor the germ.

I have been particularly interested in this epidemic, and I have had ample opportunity to study the sputum and other secretions in my laboratory. That the so-called Pfeiffer-bacillus—if such an organism does exist, and is not merely a transition-form of the coccus family—is the cause, no intelligent bacteriologist that has had experience during this epidemic would asseverate; for, we have found this organism in no greater numbers than have ordinarily been observed in sputum and other pathologic material at other times. Even in the epidemic of 1890, Pfeiffer's association of his organism with the disease met with considerable opposition, so, it still is doubtful whether the bacteriologic cause of that epidemic was established. I may mention here, however, that his organism was a dominant feature, occurring in a much greater percentage than has been the case during this present epidemic. Faulty technic, as a reason for failure to find the Pfeiffer-bacillus, is out of the question, as the technic of today is far superior.

I heartily agree with the Doctor, that greater attention should be paid to the primary pathways of infection or the environmental conditions that favor the development, virulence, and transference of pathogenic bacteria. We have reduced epidemics of typhoid fever, dysentery, and cholera to a minimum, by means of a systematic study of water supplies. We have controlled malarial outbreaks by studying mosquitoes and their breeding-places the swamps. Aerial transmission, however, is difficult to control. I am a firm believer in fresh air; yet, at times, the atmosphere is loaded with a pathogenic bacterial flora or other disease-causing agencies, and, although it is "fresh," it is unhealthful. A study of the air, as to its chemical and bacterial content, with the object of devising some means of purification, as we have done with water supplies, would, probably, lead to some interesting facts regarding respiratory epidemics. The Doctor's theory anent an irritating gas may be perfectly correct; at least, it has offered food for thought and probably will instigate someone to devise means for the better study

of the air and also its purification, if need be.

If an individual becomes wounded, there are only two ways possible to infect his wound. He may supply the germ himself, from his throat, skin, et cetera or it may be deposited on the wound by the adjacent air, either directly or indirectly. I believe that the same holds good for any infection; there must be something besides the mere presence of the germ that gives it an open road.

So, it is possible to see that his theory of a gas, as being the cause of the primary lesion of the victims in his epidemic, has merit. For, who is here to prove that the air is not surcharged with a gaseous substance, some matter capable of irritating the mucous membranes of the respiratory tract, thereby reducing its resistance to the many kinds of organisms that have been identified in this epidemic and credited as being secondary factors?

DOCTOR CROFT: In closing, I want to say that even lay people have recognized that there is a change in atmospheric conditions. Why cannot science? Last Saturday night, the air was typical and I got some of it, myself. The following day, I was greatly depressed and had pains all over. Was this a mild attack of the influenza? What is this irritant that seems to be in the air? When it is chilly, there seems to be an irritating cloud that hugs the earth, especially when the sun goes down; it comes like a blanket, and, next day, the doctors are busy. The atmosphere, when it attracts my attention, is very damp, dense, stuffy and chokey, and there is observable a slight perceptible odor. It irritates the mucous membranes like chlorine and clings to the earth like marsh-gas.

I advanced this theory about a gaseous primary cause of this condition about two months ago and I still stand on the same ground. In my paper, I have given the etiologic statistics, to show that the condition is not owing to some, yet to be discovered organism; so, to term it influenza would be to say that any typhoid-like condition is typhoid fever. To say that all the "bugs" in the universe are to be blamed for this epidemic, is not getting anywhere. We all know that physical, chemical and thermal agents are the precursors of germal infection. The organisms associated with this disease, all are agreed, are responsible for only the secondary conditions.

I hold that a chemical agent in the atmosphere is responsible for the primary irritation that paves the way for the bacterial infection. Now, let someone prove the fallacy of this theory.

Our scientific brothers call it contagium, while it has traveled faster than the crow flies. Yet, who infected the Eskimos in the inaccessible far North, or the inhabitants of countries in the far south end of the globe, at the same time that Europe and America were invaded? It is interesting to note that it is with the greatest difficulty that Rosenow's vaccine is being conveyed

to the Eskimos. It is a well-recognized fact by veterinarians that during or shortly after an epidemic of human influenza domestic animals suffer from the equine type. The association between the diseased human and the healthy animal is evident; still, who conveyed the disease to the wild animals of Canada and Africa? There are mighty few healthy humans that come in contact with them, much less so a poor victim of influenza.

I would say that, in an epidemic of this

type, when no strict quarantine of houses had been instituted, one of the great distributing infecting centers would be the postoffice. The mailcarriers are taking the mail to the people all over the city and back to the postoffice, where hundreds of people work.

I have heard someone say that leukopenia is characteristic; but, can this same diminished number of white blood-corpuscles be caused by a chemical irritant, rather than by bacterial toxin?

Notes on Meningitis

With Clinical Reports on 5 Cases

By HYMAN I. GOLDSTEIN, M. D., Camden, New Jersey

EDITORIAL COMMENT.—This is the first instalment of a detailed study, clinical and literary, of meningitis, by that indefatigable student, Doctor Goldstein, whose interesting study of Influenza was published in this journal a few months ago. The present subject is timely and the discussion will be found of value.

I WISH to report several cases of meningeal disease occurring in adults and children, and, in addition, briefly to discuss the symptoms and more important diagnostic and therapeutic features of meningitis in general.

The first patient, an Italian, a man of 33 years, married nine years, father of one child, which died two hours after birth; had always been in fairly good health; denied having had venereal disease; was in Brazil for six months, eight and a half years before, and while there had had an operation for hernia (?). When first seen, he had been sick one week: complaining of having had a chill and feeling chilly, also having a severe racking headache and excruciating pains in the back. He was markedly constipated and a day or two later began to vomit. The headache was frontal, principally, but, also on the "top of the head" and, later, occipital. There was some fever—temperature, 102° F.; pulse, 84. He had no convulsion, no ocular palsies, no nose, ear or throat-symptoms.

We have here, then, the *usual symptoms* of the onset of meningitis, namely: severe headache, some fever, sudden vomiting of the projectile or "cerebral" type, and constipation. Also a slow pulse, becoming irregularly slow. (This probably can be explained by the difference in the degree of intracranial pressure; however, this is not always so.) There were neither facial

or labial herpes, nor petechiae or purpuric spots. There was some hyperesthesia of the skin, especially over the abdomen. In the usual type of (purulent) meningitis, there often is present a very extensive herpes, involving the lips, nasal ala, face or ears. The absence of slow pulse and herpes does not, however, eliminate the diagnosis of meningitis, although their presence aids in making a positive diagnosis. Later, the patient began to gnash and grit his teeth almost constantly, especially while sleeping. The neck became moderately retracted and quite rigid. There were no myoidemas. His blood pressure, when he was first seen, was 145 systolic and 90 diastolic. There were present neither the Kernig and Brudzinski sign, nor the Babinski reflex. The pupils were equal. The next day, his pulse was only 74, and a slight fever still continued. There was no dermographia and no eruption at any time. He had difficulty in urinating and eventually had to be catheterized repeatedly. The Widal reaction was negative.

A culture of the sputum showed many streptococci, but, few staphylococci. The malarial parasite was not present in the blood. A blood culture was negative. A blood Wassermann test was negative on two occasions. A spinal-fluid Wassermann test also was negative. Urine tests were negative. There were no typhoid-bacilli

and no pyogenic bacteria in the blood. Animal-inoculations with spinal fluid, sputum or blood-serum were not done, as the later progress of the case left no room for doubt as to the diagnosis of tuberculous meningitis. There was harsh breathing over the left apex. Râles were absent. There were some signs of impairment, but, no cardiac murmurs. Later on, a sputum specimen examined at the University Hospital showed tubercle-bacilli present.

A blood test revealed the following composition: 4,570,000 R. B. C.; 5800 W. B. C.; Hb. 88 percent W. B. C.: 66 neutrophiles, 26 lymphocytes, 5 large mononuclears, 1 transition forms, 1 eosinophiles, 1 basophiles.

Lumbar puncture—fluid, under 20 mm. pressure, about 18 or 20 mils (Cc.) removed: slightly yellowish; not clear; with Wright's stain showed great excess of lymphocytes; no xanthochromia.

The Widal, spinal, and blood Wassermann tests were again made at the University Hospital, and they also proved negative.

Spinal fluid—examined for microorganisms: the report being negative, it was not repeated. The cells were not very numerous, there being about 20 per field.

Leukocytes: 175 in 1 ccm.; lymphocytes, 85 percent; polymorphonuclears, 4 percent; endothelial, 11 percent.

The urine now showed some albumin. A few granular casts were present.

At the suggestion of Dr. Alfred Stengel, 10 grains of urotropin in 20 mils of saline solution was given introspinally each day, after the removal of a similar amount of spinal fluid. No opisthotonus occurred.

The pain in the back of the neck and down the spine as also the hyperesthesia increased. Kernig's and Brudzinski's "frog-sign" and the identical "reflex" ("contralateral" reflex) were present. The Babinski reflex was absent. Before death the man suffered excruciating pain, and was markedly emaciated.

The Second Case

The second case that I wish to report was seen by me for the first time on April 12, 1918, being that of a small poorly developed baby twelve days old.

The infant had been fretful, restless, crying, and had not taken the breast for two or three days. It was delivered by a midwife. It had had "twitchings" and convulsions a day or two before seen by

me. Its neck was rigid, and it cried when touched or turned over or if an attempt was made to pick it up or raise its head. The next day, all the typical textbook-signs and symptoms of meningitis were present. At the Cooper Hospital, lumbar puncture was tried. No spinal cultures were made. A culture from the sore, fetid, and inflamed umbilicus showed staphylococci and diphtheroid bacilli (*colon-bacillus?*). Neither tetanus-organisms, streptococci, nor meningococci could be found. The discharge about the umbilicus was yellowish and foul-smelling.

This was a case of meningitis beginning about seven or eight days after the child was born, of umbilical origin, the infection originating, probably, through the contaminated water used in bathing. The child died fourteen and one-half days after birth.

The father's Wassermann blood test was negative. The mother, a primipara, had worked in a cigar-factory until six weeks before the birth of the child.

The Third Case

Emma Z., aged 5 years, white, female child, had influenza and pneumonia (?) several weeks ago and has been ailing, with fever, and other symptoms, up to the time that I first saw her. At this time, there was stiffness of the neck, strabismus, positive Kernig sign, cerebral *tâche* (Trousseau's Sign), Squire's Sign—a rhythmical dilatation and contraction of the pupils caused by extending and flexing the head, "scaphoid" abdomen and emaciation; frequent outcry and so forth. At the first lumbar puncture, about 55 mils (Cc.), of fluid was withdrawn under considerable pressure. This fluid was clear, no microorganisms were demonstrable, cell count 920 per cubic millimeter. Polymorphonuclears, 70%; mononuclears, 26%; Noguchi globulin test + + + ; Heller's test + + + ; Acetoferrocyanid test + + + ; Reducing substance, absent; Lactic acid +, 1 drop; KMNO₄ test + 5 seconds. Wassermann test negative. A tentative diagnosis of tuberculous meningitis was made.

At the second lumbar puncture, about 40 mils of slightly turbid fluid was withdrawn. Upon centrifuging a thin purulent sediment formed. Numerous pus-cells, of course: Polymorphonuclears 85%. Noguchi globulin test + + + , Reducing substance, trace. KMNO₄ test + 10 seconds. Heller's test + + + . Acetoferrocyanid test

+++. Meningococcus present intracellularly in extremely few numbers.

On November 12th, the report from Dr. A. I. Rubenstein, pathologist and bacteriologist of Mount Sinai Hospital, showed a finer purulent sediment to be present in the fluid taken at the third lumbar puncture. There were also present meningococci in few numbers, these being relatively decreased in numbers. 60 mils of cerebrospinal fluid were withdrawn at the fourth lumbar puncture; the fluid being fairly clear, with only a thin purulent sediment. Pus cells. Meningococci present in some numbers and many were extracellular. The patient had so far received three intraspinal injections of polyvalent anti-meningococcic serum, of 30 mils each, or a total of 90 mils. Internally, bromides were given. Enemata of salt and bicarbonate of soda solutions. Sodium bicarbonate, citrate of potassium and sodium were also given by mouth. Urotropin was not used—because a distinctly acid medium is necessary for its efficient action, the cerebrospinal fluid is alkaline. A dilute solution of liquor thymolis comp. was used in the nose and throat.

In this case Gower's sign was present, i. e., slight pressure, as that of one knee on the other, or slight irritation would very promptly cause a red spot or patch. The application of the very mildest irritant or heat, was surely liable to cause vesication.

The finger-nail being drawn very lightly over the abdominal integument, produced a congested red streak that persisted for several minutes (Trousseau's sign—*tâche cérébrale*). Idiopathic muscular spasm (myoedema) was not very evident.

Very early, there was noticeable a disturbance of the third nerve—papillary inactivity and a tendency to miosis, which, then, gave away to wide dilatation. At present the pupils are widely dilated, indeed, almost fully so.

Injection of iodoform emulsion within the spinal canal was not tried in any of the cases.

The Fourth Case

A case of tuberculous meningitis occurring in an Italian boy, 17½ years of age, with turbid cerebrospinal fluid, with a sudden onset and rapid course resembling acute epidemic cerebrospinal meningitis.

Fred D., Italian, age 17½ years, worked in shipyard. First seen on December 14,

1918; had been ailing for nearly a week, having presented symptoms of influenza. A few days later, evidences of pneumonia appeared. The following week, he had apparently recovered and come downstairs without permission. He walked about a little, though feeling weak. I insisted that he return to bed, because of a rise in temperature to 101° F. On Christmas day, he complained of severe headache; headache was also complained of the night before and was associated with backache and vomiting. The following day, the neck appeared slightly rigid and very tender; there was a slight "Kernig" and "Brudzinski". I told the parents that the boy had meningitis and that a lumbar puncture should be done. This was refused, whereupon I withdrew from the case. The day before the boy died, I was again called in; a lumbar puncture was done, and about 45 mils of cloudy fluid was withdrawn under pressure.

Dr. A. J. Rubenstein, of the Mt. Sinai Hospital, Philadelphia, reported to me that the fluid contained pus (polynucleosis)—there was a thin purulent sediment. Reducing substance +. Ross-Jones and Nonne +. Protein test strongly positive. Pus cells (polynucleosis). No organisms demonstrable after prolonged search (over 2 hours).

Doctor Rubenstein gave it, as his opinion, that it was surely a case of meningococcal meningitis. The spinal puncture was made eight days after the beginning of the meningeal symptoms (owing to parental opposition). I sent a spinal-fluid specimen to the State Laboratory of Hygiene and I received a report that meningococci could not be found, but that tubercle bacilli were present. Widal tests were negative. Malarial smears—negative. Throat cultures—showed staphylococci. The boy's temperature was not high at first, rising to only 101° on the first two days, while the pulse was 84-88. He had no herpes, no petechiae, abdomen not rigid. He cried out occasionally and especially when attempts were made to move him.

On the morning after the spinal fluid examination, the boy died—from acute pulmonary edema, with an almost indigo-blue color, frothing and foaming at the mouth. I tried atropine and digalen with hot applications, but, to no avail.

The day before the boy died, when I was called in by the parents to see him

again in order to do spinal puncture (after a delay of nearly a week!) I found him in pretty bad shape. His neck was rigid, he had a marked "Brudzinski" (Neck Sign), also "Kernig", *tâche cérébrale*, ocular palsy, squint of right eye, Squier's Sign was present, as was also the identical contralateral reflex. Chvostek's facial sign was positive +; Babinski absent.

The acuteness of the case, with rapidly increasing symptoms, and the rapid development of the stuporous condition, suggested cerebrospinal rather than tuberculous meningitis especially when the spinal fluid appeared turbid and under considerable pressure.

The Health Laboratory report, however, showed tubercle bacilli present in the cerebrospinal fluid. The patient had received bromides by mouth, and 30 mils of polyvalent antimeningitis serum, pending the laboratory reports of the cerebrospinal fluid examinations.

The Fifth Case

Meningismus, David B., age 3 yrs. Small Jewish boy. Had influenza and bilateral bronchopneumonia recently. Measles 2 years ago. Had some trouble with ears during influenza-pneumonia (suppurative otitis). Several days ago, began to vomit, fever, and earache. Another physician said it was due to "stomach upset". Later on, catarrhal pneumonia was given as the diag-

nosis. When I first saw the child on the fifth or sixth day of the disease, examination revealed a positive Brudzinski and Kernig. Neck was tender and rigid. Loss of weight was noticeable. The child was crying out on the slightest touch or on attempting to raise its head. Pulse was relatively slow. Temperature per rectum $104\frac{1}{2}^{\circ}$, *tâche cérébrale* present. The contralateral (identical) "reflex" present. Lumbar puncture was done immediately with the withdrawal of 40 mils of fluid.

A. I. Rubenstein reported 15 lymphocytes per Cmm. Albumin tests were fairly normal. His opinion was that it was a case of meningismus. No organisms found. Blood count—W. B. C. 11000. 62 percent polymorphonuclears. Spinal fluid, Wassermann smears negative. Throat culture, staphylococci. Nose culture, staphylococci. This is a case of meningismus complicating an otitis and acute bronchiolitis. The removal of the spinal fluid afforded considerable relief.

This was here, therefore, a condition of non-bacterial serous meningismus, complicating an otitis (suppurative) due to staphylococcal infection and bronchopneumonia with tracheopharyngitis. The child did not receive any serum, and should make a rapid recovery, if no other serious complications arise.

[*To be continued.*]

THE investigators in hospital wards and laboratories have little idea of the difficulties the general practitioner has to encounter. He must ever be on the alert, prepared to make an observation at any hour of the day and night; attacks of illness which may arise suddenly must find him prepared to take advantage of his opportunities.

Sir James Mackenzie.

What Others are Doing

VACCINES AND SERUMS USED IN THE BRITISH NAVY

As showing the more general utilization of vaccines and serums in military practice, the following list of biologic products employed in the British Navy, all prepared in the laboratories of the Royal Naval Medical School, at Greenwich, is of interest at this time. The statement regarding quantities dispensed is illuminating:

Typhoid-vaccine, 5,400 mils (Cc.).

Paratyphoid-vaccine, 21,500 mils (Cc.).

Triple typhoid-vaccine (Naval formula), 247,700 mils (Cc.).

The triple vaccine is a mixture of bacillus typhosus, b. paratyphosus A., and b. paratyphosus B. heated to 55° C. for half an hour; when 0.5 percent of phenol is added.

Cholera-vaccine (prepared from several strains of Balkan original, 8600 mils (Cc.).

Antisepsis-vaccine (a mixed polyvalent vaccine containing streptococci and staphylococci) 48,400 mils (Cc.)

Influenza-vaccine, a mixed polyvalent vaccine containing bacillus influenzae, streptococci, and pneumococci), 144,000 mils (Cc.). (Cc.).

Melitensis-vaccine, 1380 mils (Cc.).

Staphylococcic vaccine, 910 mils (Cc.).

All antitoxins and serum prepared elsewhere were issued from the school to the various divisions, depots, and ships.

Tetanus-antitoxin, 14,800 doses.

Diphtheria-antitoxin, 2400 doses.

Antidysentery-serum, 2800 doses.

Antistreptococcic serum, 1250 doses.

Antimeningococcic serum, 5000 doses.

Other sera and vaccines in smaller quantities.

ON DIGITALIS-THERAPY

Digitalis-therapy should be carried out on certain well-established principles. To begin with, one must know his preparation of digitalis. Much of the drug on the market is perfectly valueless, as also are, particularly, all of the unusual preparations so highly lauded. This, at least, is the opinion of Dr. John L. Heffron, of

Syracuse, New York, as expressed in an article on some irregularities of the heart and their treatment, published in *The New York State Journal of Medicine* for December last.

Some years ago, the author relates, he referred to a local druggist an article on the fat-free tincture of digitalis. It was there asserted that this tincture is less nauseating, while the extraction of the plant-fat by means of deodorized benzin and its precipitation with ammonia in no way lessened the efficacy of the drug. Having occasion to employ digitalis personally for his own "perfect comfort", Doctor Heffron changed from the U. S. P. tincture to the fat-free preparation; however, he found that he had to increase the dose. Later on, both the U. S. P. tincture and the fat-free tincture were made for Doctor Heffron from certain assayed leaves when it was found that the U. S. P. tincture was, practically, of 100 percent the strength required by the United States Pharmacopeia, while the fat-free tincture was of less than 25 percent the standard strength.

With regard to the assertion of some physicians, that they never have observed any effect from digitalis, Doctor Heffron declares that either their prescriptions never were filled correctly, effective digitalis-preparations not having been dispensed, or that they had prescribed the drug in inadequate dosage. According to Doctor Heffron, digitalis does produce, in every person, at least one of the following specific effects; namely: a slowing and strengthening of the pulse, diuresis, nausea and vomiting or else diarrhea. To obtain an effect, the tincture should be begun in doses of 15 minims every six hours, and this dosage should be continued until one of the effects mentioned is produced.

Digitalis is absorbed but slowly. When given by mouth, no effect should be looked for in less than thirty-six hours, and it may be delayed, even, for forty-eight hours. It often happens that the desired effect upon the heart is not manifested until nausea results. Preceding the nausea, the

appetite, in some, becomes unusually sharp. If this is observed, the impending nausea may be averted by cutting the doses down to two, instead of four, in the twenty-four hours. Unless nausea, which is central, or its precursor is produced, these four daily doses should be continued until a desired digitalis-effect is produced. Upon recognition of this latter, the dose must be reduced at once, and thereafter but two doses of 15 minimis each of the tincture of digitalis, twelve hours apart, should be administered daily; this being continued until all the symptoms of impaired circulation have disappeared and until the pulse is reduced to a rate under 80 per minute.

When this result is obtained, only a single dose a day should be taken. If 20 minimis of the tincture hold the pulse and relieve the symptoms satisfactorily, a further reduction should be tried. Proceeding in this way, it can be ascertained just how much of the drug is necessary daily to produce "perfect comfort", and that dosage may be continued, if need be, throughout life; and it will never have to be increased except when the heart shows definite signs of further deterioration.

To Doctor Heffron's excellent presentation we may add that all this is applicable, with equal force, to other potent and effective digitalis preparations, beside the tincture prepared by Doctor Heffron. Several such products are utilized successfully and may be employed confidently; indeed, often they are more dependable by far, and more uniform than is the tincture.

THE BLIND CARRY ON

"Don't call these men blind; just think of them as normal men who cannot see," is the appeal of Sir Arthur Pearson in reference to the men blinded in the war. This is the philosophy of the famous sightless British publisher, who has done such a magnificent work for the blind in founding St. Dunstan's in England, as revealed in the *Red Cross Magazine* for April, and is the one which every family of a blinded soldier should strive to reach.

The government is offering every opportunity to men disabled in battle to acquire the training through which they may return to a life of economic independence, but the moral backing of the family is absolutely necessary if the greatest degree of success

is to be attained. With this end in view Red Cross workers have established a close relationship with all families of wounded men, supplying not only the friendly counsel, but the material necessities, enabling the family to carry on in the absence of the breadwinner.

Already 600 men from St. Dunstan's in England have gone forth to economic independence, many of them finding work more remunerative than that in which they engaged before they had lost their sight. In the United States the blinded soldiers are trained at U. S. General Hospital No. 7, Roland Park, Baltimore.

PITUITARY HEADACHE AND ITS CURE

A type of headache that the writer never has seen described in literature is studied by Dr. Irving H. Pardee, of the United States Army, whose report appears in the February 15 number of *The Archives of Internal Medicine*. This type of headache, he believes, results from enlargement of the hypophysis (pituitary gland), following stimulation of this gland or some pathologic condition. It is more common in women than in men, and may occur at any age, but, is mainly encountered during adolescence and early adult life.

The gland is surrounded on three sides by a bony framework, so that enlargement or congestion causes pressure, which eventually may result in bone absorption, the earlier symptom of which, however, is pain.

During menstruation and pregnancy, there is a physiologic enlargement of the gland, so that headaches are more liable to be felt at those periods, and, consequently, more likely to occur in women than in men, as already stated. Other causes of pituitary headaches are: shock, traumasms of the skull, disturbances of other blood-glands (such as the pineal, adrenal or thyroid), abscesses, tumors, as well as other growths.

The symptoms of pituitary headache, according to Doctor Pardee, are characterized by, (1) its location; (2) its duration and persistence; and (3) its being relieved under specific medication.

A patient will come to the physician complaining of a frontal headache. Upon further questioning, he will say that it is situated "deep in the forehead, behind the

eyes," often feeling as though it were pressing upon them, and producing a "dazed" sensation. Always, when asked, but, not infrequently without being asked, the patient, placing a finger against either temple, and pointing directly inward at the hypophysis, will say, "Doctor, it is between here".

Depending upon its severity, the sensation is described as a "tightness" between the temples, a feeling of pressure or distention, or an intense, bursting ache. Rarely they complain that there is a sensation of "something in there", and, on moving the head, they may feel as though "a marble-like object were rolling about". Deep pressure upon the temples may elicit some tenderness. The author continues as follows:

"This headache is very persistent, usually lasting from one-half hour to forty-eight hours, and it may be continuous, frequently coming on, if in a woman, at the time of the menses. It often leaves very suddenly, but, returning with exacerbations; it is accentuated by excitement, by stooping over, and by the ingestion of sugar. At the climax of the headache, there may occur nausea and vomiting, after which, there will come relief. Marked fatigue accompanies the headache, the patient hardly being able to drag himself about, and there is present, after stroking, a broad white skin-line, an evidence of suprarenal deficiency, caused by the drain on the adrenal function by the exhausted pituitary gland.

"The patients feel slowed down in their activity, yawn excessively, are sluggish and willing at any moment to seek an opportunity for sleep. They are particularly prone to attacks of depression, which come on without any obvious cause, and have as their basis some very insignificant fact. In children, there is likely to be evidence of mental retardation, with dullness, sluggishness of the mind, and lack of the higher reasoning powers; this usually occurring in hypopituitary conditions, while, in adults, we sometimes see a loss of moral control, which results in frequent enforced visits to the police courts. In women, the menstruation shows certain characteristics in these pituitary individuals. It may begin very early, at the age of 10 or 12, or else very late, at 16 or 18. The periods are irregular, often coming every two or three weeks, and the flow is

excessive. Sexual development may be very precocious in the hyperpituitaries. Polyuria is occasionally present, while constipation frequently accompanies the height of the headache, with diarrhea at its termination.

"Knowing that the pituitary gland, together with the adrenals, controls the mobilization of sugar in the body, it is not strange that these patients exhibit an anomaly of sugar-metabolism, as shown by the periodic display of an intense craving for sweets, a sort of dipsomania, as it were, for sugar. The satisfaction of this desire being accomplished by eating candy, it is almost invariably followed by a typical pituitary headache. We can readily see that, owing to the increased demands upon its functions, there occurs an enlargement of the pituitary gland, and, following upon this, the adrenals are called upon to assist in mobilizing the sugar, the excessive drain upon them causing great fatigue and the formation of a vicious circle."

In addition to the symptoms enumerated above, in pronounced cases of defective secretion of the pituitary gland, there may be present signs suggestive of acromegaly, even when this condition manifestly is absent. These signs are, briefly: some alteration of the bony framework, bringing about a general coarseness of the features, with thickening of the lips and projection and heaviness of the lower jaw; broadening of the hands and clubbing of the fingers; an increase of growth of hair, coarse in texture, together with a tendency in males to assume the female type and, in females, to assume the male type in the distribution of hair. The pulse usually is slow and the blood pressure likely to be low. It is to be understood, of course, that these bodily changes will be discovered only in well-marked cases of dyspituitarism.

The treatment of this pituitary headache consists in the administration of a good pituitary preparation, the whole substance being used, the dose ranging from 1-4 grain to 2 grains three times daily; the average being 1 grain, preferably given one hour after meals. If the diagnosis has been properly made and there has taken place no radical change in the size of the gland, then, under this treatment, the attacks of headache will, in a few days, begin to diminish in intensity and

the associated symptoms will gradually disappear.

MEDICAL BOARDS TO SUPERVISE THE HEALTH OF MISSIONARIES

A medical department, under the direction of the Board of Foreign Missions, to guard the health-efficiency of its missionary workers, has been established by the Methodist Episcopal Church, in connection with its missionary centenary to raise \$120,000,000—\$85,000,000 for the Church North and \$35,000,000 for the Church South—for general world upbuilding and the extension of its missionary work at home and abroad. No other church has organized such a department.

Dr. J. G. Vaughan, M. D., formerly of Nanchang, China, is executive secretary of the new department, with temporary offices at the headquarters of the Missionary Centenary, 111 Fifth Avenue, New York. Doctor Vaughan was graduated from the Northwestern Medical School at Chicago, in 1907, and for six years was a medical missionary in China. On his return to this country, in 1916, he became connected with the office of the chief surgeon of the Chicago, Rock Island & Pacific Railroad, in Chicago. He left that position, to organize the new medical department of the Methodist Foreign Missionary Board.

Missionaries in the field and on furlough will have the benefit of counsel from the new department, while all candidates will undergo medical examination by the physicians in charge.

To provide for the best service in this respect, suitable offices and equipment will be obtained, with a sufficient staff of trained workers to meet the increasing demands arising from the enlarging force that the Centenary program will require in the field. The Church invests in each missionary from \$20,000 to \$50,000 for life-work, and it will be one of the duties of the medical department to see to it that each person accepted is a "good risk". Supervision of the health of the workers in the field will gradually be taken over by the new department.

IMPROVED TREATMENT FOR SCABIES

In *The Medical Record* for February 22, Dr. Charles Greene Cumston refers to a treatment for scabies, as published recent-

ly by Oppenheim, which is timely, because of the increased prevalence of itch since the war, even among the well-to-do. Oppenheim's method is based upon the treatment of 1200 cases and may justly be called a rapid cure. He proceeds as follows:

The entire body is rubbed for a quarter of an hour with soft soap, after which the patient enters a warm bath and removes the soap with a brush of wood fiber. This procedure of mechanically removing the soap should continue for one-half hour. The patient then comes out of the bath and dries the skin thoroughly with towels, after which the following unguent is applied:

Precipitated sulphur	25 Grams
Potassium carbonate	10 Grams

Two hours later, another warm bath is taken, the ointment is washed off, and, after drying the skin, a zinc-paste is applied. This completes the cure.

Another Treatment for Scabies

Oppenheim's method of treating scabies, as described by Doctor Cumston, is supplemented by the following procedure employed by the latter, himself but, which originated with Prof. Charles Du Boies, of Geneva. But little cutaneous irritation follows this procedure, and a cure can be assured within a single night, if the treatment is carefully and exactly carried out. Here it is:

The patient rubs soft soap carefully all over the body and neck up to the chin, especial care being taken to cover well the interdigital spaces of the hands and feet. Then, a hot bath of one-half hour's duration is taken, the soap being removed by mild friction. After the skin has been thoroughly dried, the following ointment is rubbed in:

Petrolatum	125 Grams
Ichthyoil	10 Grams
Pommade d'Helmerich ¹	80 Grams

The patient dons some old underwear and retires for the night, although, it may be added, that the ointment does not stain the garments.

On the following morning, a hot bath, to which 100 Grams of liver of sulphur has

¹Pommade d'Helmerich (*French Codex*)
This has the following composition:

Flowers of sulphur.....	10 Grams
Potassium carbonate.....	5 Grams
Water	5 Grams
Lard	35 Grams

been added, is taken, the patient remaining in the water for fifteen minutes, after which, he simply dries himself with towels. This completes the cure.

As the liver of sulphur requires some time to dissolve, the patient should be instructed to place the required amount of this drug to be used in the morning bath, into a 2-quart pitcher of hot water and allow it to dissolve over night, when, next morning, it can be poured into the bath.

In order to render the ichthyl-sulphur ointment more readily accessible to American practitioners, the following formula is suggested:

Ichthyl	10 Grams
Flowers of sulphur.....	12 Grams
Potassium carbonate	6 Grams
Camphor, powdered	2 Grams
Lard60 Grams

Precipitated sulphur being somewhat more active than the flowers of sulphur, the former may be preferred by some. Its greater activity is due to its extremely fine division and also to its giving off a certain amount of sulphureted hydrogen.

No mention of change of clothing, bedlinen, et cetera, has been made, as it is assumed that the absolute necessity for so doing is well known to all.

ANTHRAX FROM SHAVING BRUSHES

In a recent number of this journal (Oct. 1918, p. 763) the occurrence of anthrax infection through contaminated shaving brushes was referred to, the information being derived from *Public Health Reports* (July 12, 1918) in which the English experience in similar cases was reported. In the *Journal of the American Medical Association* (July 13, 1918, p. 124), also, an account was given of the occurrence of cases among the American military forces, and in the same journal (Oct. 5, 1918, p. 1133) three similar cases were reported, having occurred at Camp Hancock, Georgia.

In the *Boston Medical and Surgical Journal* (Feb. 6, p. 149) First Lieutenant R. W. Angevine, from the surgical service of the Rochester (N. Y.) General Hospital reports a further case which was observed in a robust male of twenty-four years, and of American birth, who entered the hospital at 6:45 o'clock one evening, having been referred to the house for treatment of an in-

fection showing quite inconspicuously on the left cheek.

In view of the fact that an increasing incidence of anthrax septicemia from accidental inoculation of shaving brushes seems to prevail, indicating a lessened precaution in excluding raw materials from certain regions used in making brushes and material heretofore rejected because anthrax had developed after their use, it will be of interest to reproduce Doctor Angevine's report in detail so that physicians may be on the alert in the case of shaving wounds that give rise to serious symptoms soon after they have been made.

This patient told the story of having shaved that morning and of having accidentally cut himself. A new brush had been used. The patient paid no particular attention to the slight wound during the day, but, redness and swelling gradually developed, and the patient presented himself for treatment that evening, a rather pronounced temperature having developed.

On the evening of entrance, a small incised wound about one centimeter in length was described as having been present in the skin of the cheek about one-half inch above the jaw and about half way between the angle of the jaw and the point of the chin. A lesion, papular in form, had developed at a point along this incision and was surrounded by an areola of swelling. That night, the entire left cheek was somewhat swollen, the enlargement reaching from the outer canthus of the left eye to the line of the jaw. Warmth was evident, but induration was slight or absent. The area was tender to palpation. Pulse, temperature and respirations were recorded as 88, 102.2, and 20. Ice was applied to the cheek.

The following day the lesion appeared as a small, brownish macula-papule somewhat less than a centimeter in diameter. The lesion became vesicular, the thin wall retaining blood-stained fluid. Induration was more definite than on the previous day; tenderness was acute but pain was not a symptom. The patient was prostrated and nausea and vomiting were twice noted in the records. On the third day of the clinical course, the lesion was noted as having broken down and presented a depressed crater-like center. In the depressed area was a newly-formed unorganized crust, surrounding a definite black eschar. About the carbon-like material was a ring of tissue

of a bluish tinge. Around this was a zone of redness, swelling and definite induration. Edematous tissue extended for eight or nine centimeters in each direction about the central focus.

The patient complained of "aching all over the body" but not of pain in face. Flaxseed poultices were applied to the area of swelling and morphine was administered to combat restlessness and induce sleep. There was vomiting during the night and, on waking, the patient complained of intense headache. Pulse, temperature and respiration were recorded as 96, 103.2 and 25, respectively.

On the fourth day the lesion showed a large area of eschar; the swelling and induration and surrounding edema were more marked and the enlargement of adjacent lymph-glands was very evident. The pulse was 110, temperature 104.5, and respirations 40. The swelling had extended so that the left eye was entirely closed and face and neck were edematous. Palpation of the cheek showed that the induration involved the entire thickness of the soft tissues. The patient was able to open his mouth just enough to admit the tip of the finger. The temperature rose to 105, sweating was profuse and chills frequent. During the afternoon the patient showed signs of irritation of the base of the brain and lapsed into unconsciousness. These symptoms increased in intensity, orthotonus developed and the patient died at 7:45 that evening.

A white-count taken on the day after entrance gave a leukocytosis of 31,600 per cubiccentimeter. The differential showed: Polymorphonuclear leukocytes, 82%; lymphocytes, 14%; mononuclear leukocytes, 2%; transitional cells, 2%.

The urine was negative. Culture from the cheek lesion taken on the second day gave a small diplococcus, a large diplococcus, a short diplobacillus and b. anthracis. Blood culture was positive for the organism on the third day. Lumbar puncture taken that day showed the presence, morphologically, of anthrax organisms in large numbers. Samples of the blood injected into the lymph sac of a rabbit proved fatal in 36 hours, whereas it was pathogenic for the guinea pig in 24 hours. Examination

of the rabbit and guinea pig after death showed a purulent exudate in the peritoneal cavity, and the presence of the specific bacillus. The organism from beneath the gangrenous eschar was smeared and found to be gram-positive, occurred in short chains and average size was given as 1 by 6 microns. No spores were noted in the smears. The cultures from the blood gave typical appearances morphologically, and culturally the growth gave the Medusa-head appearance on agar. Spores were noted in the culture.

A PROPHYLACTIC AGAINST INFLUENZA INFECTION

A wash for the mouth, teeth or nose composed of saturated thymol solution, mixed with from one to six parts of water, gave good results in the experience of Dr. Philippe Sainte-Marie, of Sorel, P. Q., Canada (*Boston Med. & Surg. Jour.*, Feb. 6, p. 150) if used with caution. The most effective, curative and preventive that this author employed was camphorated oil taken internally, whether by mouth, by nose, on sugar or in capsules, or in doses varying from 7 to 180 drops intramuscularly. The mouth wash and the camphorated oil, used conjointly in five-drop doses and taken at four-hour intervals during the epidemic, prevented many from having influenza. Antiseptic treatment of the bowels was another measure practiced successfully.

Therapeutically, the 10-mil (Cc.) intramuscular injection of camphorated oil saved many who became cyanosed with temperature 104°F., pulse 110 to 130, unconscious, and dying. The injections, repeated every six to eight hours, according to indications, and sometimes varying in strength proved very efficacious.

It also was learned that the pneumococcus was influenced by the gum camphor, and having used it successfully in his previous experience, Doctor Sainte-Marie did not hesitate to employ it and did so with success. The use of camphor to sustain and increase resistance against influenza was not surpassed in effectiveness even by strychnine, which also was given judiciously.

Let's Talk it Over

Studies on Food Economics

Liquid Foods and Stimulants

THE earliest recorded history of mankind recites that man's first food was fruit. Darwin maintained that man, by a process of evolution, has developed upward from one or more quadrupeds whose food consisted, mainly, if not entirely, of fruits, nuts, or vegetables.

The Holy Book records that Noah, soon after his delivery from the ark, planted a vineyard and drank of the wine that he produced from the grapes grown.

Travelers, go where they will, and among whatever peoples and races—from the lowest savages to the most civilized—report that they all seek for stimulation, in forms outside of foods proper for nutrition.

Just at the present time, there is going on a crusade against the use of alcoholic stimulants, in which crusade I have been engaged, lo, these many years. Just here, I would state my belief in alcohol as a most valuable remedy in the hands of a duly qualified physician, one that understands its physiological effects and medicinal value in certain diseases and morbid conditions of the body. In this and succeeding papers, I intend to discuss tea, coffee, chocolate, cacao, and alcohol; likewise, although more briefly, the less common stimulants in use by uncivilized peoples.

In a former article, I protested against the classing and valuing of foods according to the number of calories they are capable of yielding in the animal economy. For, I consider this a faulty and misleading classification. I maintain that foods should be divided into classes according to the functions performed by each one.

It is true that every food, in the process of digestion and in the course of metabolism, liberates a certain well-defined number of heat-units, so-called calories. Every

chemical action results in the liberation of heat-units. The old time classification I consider much better, namely, that into the nitrogenous (protein) foods and the carbonaceous foods.

The nitrogenous foods are the plastic ones, those that build up flesh and bone and the nervous tissues. They are nutritives.

Every muscular effort is performed at the expense of muscular tissue; every mental effort, at the expense of cerebral tissue; and so on through all the activities of life. This degradation or loss of life of tissue-material, demands elimination. Thus, our bodies are continually dying and they must be renewed by fresh living tissue. If the dead material is not properly eliminated from the body, then poisoned tissue is the result.

The animal body is continually giving out heat, hence, its temperature must be maintained. The most food in demand for this purpose is, mainly, nonnitrogenous, especially of the nature of the hydrocarbons, or fats; also the carbohydrates—starch, sugar, and so forth, although in a less degree.

If what I have here said is correct, then the food of nitrogenous material required by our bodies will be in proportion to the wear and waste of the body in muscular and mental work done. Any excess of waste over the supply will result in injury or disease to the body.

Professor Atwater asserts that alcohol is a food, inasmuch as it performs in the body the function of a carbohydrate (sugar), in that it is readily oxidized, with the production of heat; but, he does not consider it as a food in respect to the nutrition of the tissues of the body.

Alcohol is a valuable *quick* stimulant and likewise an anesthetic of the same order

as ether, chloroform, and the rest of them. It is a stimulant, quick in its action, hence, its value in medicine.

TEA

The experience of every confirmed tea-drinker, when scientifically and soundly interpreted, supplies condemnation of the common fallacy, that it is a conservative of vital tissues and retards their wear and waste.

The common plea for its extended use: "It is so refreshing"; "I am fit for nothing, when tea-time comes round, until I have had my tea, and then I am fit for anything." Others plead: "By its aid, I can sit up all night long at brain-work, without feeling sleepy, provided I drink amply of the infusion from time to time."

Now, what is the true significance of these facts? The sense of refreshment certainly is not a result of nutrition, nor of the rebuilding of any wornout or exhausted organic tissue.

The total quantity of material conveyed from the tea-leaves into the water is ridiculous, altogether too small for the performance of any such nutritive function; and, besides, the action occurs far too rapidly; there is not sufficient time for the conversion of even that minute quantity into organized working-tissue.

The action can not be that of a food, hence, is purely that of a simple stimulant or that of an irritant drug acting directly and abnormally upon the nervous system. The active principle that produces this effect is the crystalline alkaloid *theine*, an alkaloid belonging to the same class with strychnine and a number of similar poisons.

Most of these, when minute quantities of them are taken medicinally, act upon the nervous system; but, when used in large doses, are deadly poisons. Both theine and strychnine, when ingested in large doses, kill by overexcitation.

The practice of ambitious students, of binding their heads in cold wet cloths and drinking large quantities of tea, in order to prolong their capacity for study, is a most pernicious practice and surely entails future trouble or collapse. More than half the cases of breakdown during examination, the loss of memory and the other accidents result from overstimulation.

The practice of tea-drinking is not so bad when the beverage is used in moderation and when it is well reinforced by a

plentiful supply of milk and sugar. It then becomes a liquid food, having an exciting or stimulating action.

Doctor Johnston ("Chemistry of Common Life") says: "The waste of the body is lessened by the introduction of theine into the stomach, that it, by the use of tea." But, as I have said above, the waste of the body, the dead material, is poisonous and should not be retained.

COFFEE

The much-used coffee beverage is an infusion of the roasted berries of the coffee-tree (*caffea arabica*), a native of Arabia, Abyssinia, and of other parts of Africa, and it is naturalized in many of the tropical countries colonized by Europeans.

There are extant some twenty species of coffee-trees, but, few of them seem to possess valuable properties. Of those of most value, may be mentioned, in order, as follows: Mocha, which comes from Arabia, and is of the finest flavor. It is known by its small gray beans inclining to greenish; Java, also noted for its fine flavors, this is mainly produced in the East Indies; Jamaica coffee, with beans somewhat smaller and greenish; Surinam coffee, which has the largest beans; Rio coffee, grown in Brazil.

Coffee-infusion owes its exhilarating and refreshing properties to the presence of three substances; namely:

1. Caffeine, which occurs in the roasted bean to the extent of from 3-4 to 1 percent;
- (2) a volatile oil, which is not present in the raw bean, but, is developed, during the process of roasting, to the extent of only 1 part in about 50,000 of the roasted coffee;
- and (3) astringent acids, resembling tannic acid, but distinguished as caffeo-tannic acid and caffeoic acid. The most important of these ingredients is the alkaloid caffeine.

Caffeine is distinguished from all other alkaloids by the large amount of nitrogen which it contains; hence, its value as a nutritive. In medicinal use, it increases the blood pressure, lessens the pulsations of the heart, and augments the amount of urine excreted. At the same time, it stimulates the heart, brain, and muscles. Thus, if the pulse is frequent, yet, feeble, and the urine is scanty or suppressed, caffeine increases the strength of the heart, reduces the number of pulsations, and reestablishes the urinary secretion.

Just here I pause to remark: Many persons argue, and actually believe, that, be-

cause a given drug has great efficiency in curing disease, it must do good if taken under ordinary normal conditions.

Drugs act, and are specific, only as they control and neutralize abnormal conditions of the body. In normal conditions of our bodies, most drugs are poisons.

All the popular stimulants, the socalled refreshing drugs and "pick-me-up", such as the well-exploited coca-cola, have two distinctly and opposite actions; an immediate exaltation that lasts for a certain period and varying with the drug used and the constitution of its victim, and a subsequent depression, proportionate to the primary exaltation, but, as I believe, always exceeding it either in duration or intensity, or both, thus giving, as a result, a loss of vitality.

Since residing in the southland, some thirty-odd years, I have seen prominent physicians recommend the leaving out both of sugar and milk from coffee-beverage. This, I believe decreases its food value and relegates it to the domain of a stimulant.

CACAO

The different kinds of cacao are prepared from the seeds of trees of the genus *theobroma*, meaning "food of the gods", belong to the natural order of *butteriaceae*, represented by a number of species. The trees, all natives of the tropical parts of America, are of moderate size. They are also cultivated in the West Indies; especially the cacao-species, while its cultivation also has been introduced into some parts of Asia and Africa. The fruit is somewhat like a cucumber in shape, and from 6 to 8 inches long; in color, it is yellow, and red on the side nearest to the sun; the rind is thick and warty, the pulp is sweetish and not unpleasant. The seeds are numerous, compressed, and not unlike almonds, with a thin, pale, reddish-brown, fragile skin or shell covering a dark-brown, oily, aromatic, bitter kernel.

These seeds are the cacao-beans of commerce; when bruised, so as to be reduced to small pieces, after being shelled or decorticated, the latter are known as cacao-nibs. *Cocoatina*, *cocoa-essence*, concentrated *cocoa*, are names given to preparations from which some of the cacao-butter has been extracted, in order to render the beverage more digestible.

The theobromine, or the special crystallizable alkaloid of the seeds, resembles that

of tea and coffee, but, contains a larger proportion of nitrogen, it appears to be less stimulating in its action on the nervous system.

Chocolate is a preparation made from the cacao-beans. It is made by grinding the seeds to a very fine paste. The mill, heated by gas, is constructed of heavy rollers turning in a circular course upon a flat metal plate. A curved knife, or scoop, is attached to the rollers in such a way that it will return the paste continually, to be crushed and recrushed by the rollers until it becomes almost impalpable. The object of this is, to render the substance, otherwise difficult of solution, readily diffusible in milk or water when used as a beverage.

The paste, when unmixed, is called bitter chocolate; when sugar and flour or other farinaceous material, together with flavoring extract, such as cinnamon, vanilla, and so forth, are added, it bears the name of chocolate. These two preparations often are confounded. Chocolate is more nutritious than cocoa, while both these preparations are less excitant than either tea or coffee.

Chocolate and cocoa are extremely nutritious beverages, containing, as they do, such a large percentage of flesh-forming material. An extremely rich food is obtained when either of them is prepared with milk and then whisking in a raw egg. Our brave boys at the front have been much comforted by the generous supplies of chocolate candy sent them.

A. T. CUZNER,

Gilmore, Fla.

COMPOUND ACETANILID POWDER FOR INFLUENZA

You ask for criticisms of Dr. J. W. Shook's article (February, p. 141) on the use of morphine and hyoscine in the treatment of influenza. Well, here is one comment; not, however, to criticise.

I was graduated in medicine forty years ago. Soon after beginning to practice, the coaltar derivatives began to come into use. One evening, I was called to a sick child, and found it restless, with flushed face and a high fever. I had some acetanilid, and gave a small dose of it; I also left two more powders of it, to be given as directed. Result: a nice night, child well in the morning. This was my introduction to the coal-

tar antifebriles. Gradually I devised mixtures of the acetanilid, until I now have the following and which I dispense almost daily: Acetanilid, 1 ounce; sodium bicarbonate, 1 ounce; codeine, 12 grains; strychnine, 5 grains. Of this, I give from 1 to 4 grains as seems needed—usually at bedtime, also at 2 o'clock a. m., when there are present restlessness, pain, and fever. I do not give this remedy continuously, but, only to ensure a good night's rest, prescribing other remedies during the day.

But, what of the influenza? Well, the foregoing has been my treatment for it every time. Where there is fever, restlessness, and cough, this powder quiets, gives sleep, abates the fever, and the patient usually is better in the morning.

I have had about 125 families to treat for the influenza—families counting from 2 to 10 members, in some instances, everyone of them sick—and have not lost a single patient. I am not bragging, though; only consider myself fortunate.

O. N. HOYT.

Pierre, S. Dak.

VALUE OF ALCOHOL AND QUININE IN INFLUENZA

It is well known that there is now passing over our country a wave of emotional insanity anent the use of alcohol, and, unless we apply the prophylaxis of governmental supervision of the manufacture and sale of this drug, we shall have an epidemic greater and more far-reaching than that of the influenza.

If there is any virtue in the remedy that I suggested in my letter to CLINICAL MEDICINE (Feb., p. 143), I surmise that it is in the quinine, which probably produces, in the blood, a condition that is antagonistic to the development of the influenza-germs.

The whisky not only is a convenient menstruum, but, it most certainly does help to tide over the patient and lift him out of temporary fatigue and the depressed condition of the nervous system; thus aiding in resisting the disease-germs and preventing them from effecting a lodging.

With all due respect for the opinion of the high authorities to which you refer in your editorial comment to my letter, I am, personally, of the opinion that whisky and brandy are primarily the best stimulants at our command, and that, while, no doubt,

it is true that there occurs a secondary depression, this is so of any increased action of the mind or body. Just as if you throw a barrel of oil on the fire, under a locomotive-boiler, there will be increased steam-pressure, and this will be followed by a reaction as soon as the effect of the combustion is ended; but, by this time, the train of cars will have passed over the grade and again will continue on its normal course.

It is something after this idea that, in my experience, the quinine and whisky have proved clinically to be the best remedy.

Since I wrote my article in December, you, no doubt, have read the reports coming from the hospitals in Rome, where, during the epidemic of the influenza, it was observed that, while doctors, nurses, and the populace were coming down with the disease, the patients infected with malaria were singularly free from influenza. Upon inquiry as to the reason of this, it was discovered that this was owing to the quinine that the malaria-patients were taking and that that in some way immunized them against the attacks of influenzal infection. These reports may be found in *The Journal of the American Medical Association*.

J. J. BROWNSON.

Dubuque, Ia.

SODIUM HYPOSULPHITE IN INFLUENZA

In CLINICAL MEDICINE for February, Dr. J. H. Beynor, of Spokane, Washington, tells of using sodium hyposulphite in influenza, and you ask for reports from other who have used it thus, and for opinions on it.

I will say that I have used the hyposulphite in fully nine out of every ten cases that I had to treat. Not, as a routine treatment, but, because it was indicated in no uncertain way, and very apparent to the doctor that knows indications for remedies; and these are just as apparent to the doctor that treats the patient, instead of merely the name of the disease.

The indications for hyposulphite are: tongue and mucous membranes are pallid, and the tongue is covered with a nasty whitish, pasty, putty-like coating, especially at the base. This tells us that the system is overcharged with acid. And I

know of nothing that will correct this condition as quickly and surely as will sodium hyposulphite. I have prescribed it for thirty-five years in such conditions and never saw any deleterious effects from it.

Calcium sulphide is a wonderful remedy as a systemic antiseptic, and I use lots and lots of it; but, it does not reach the conditions outlined above nearly as satisfactorily as does sodium hyposulphite.

Why all this fuss about the influenza? I can not understand it. The doctor who knows *materia medica* and therapeutics and knows the indications exhibited by the patient for different remedies has no trouble in handling this infection. Stock bacterins are a delusion and a snare, although auto-gogenous therapy, where applicable, is a priceless jewel.

T. A. DEAN.

Casper, Wyoming.

[The Doctor's remarks anent sodium hyposulphite are interesting and may lead to the use of this remedy by others. If so, we should like to hear about it. As to the needless "fuss" about the influenza, we confess to feel rather humble in regard to our ability to treat that disease successfully. To be sure, the present writer was fortunate in having to sign only three death-certificates, while he has treated a great many more influenza-patients than that number. Yet, we all of us were confronted every now and again with unusual conditions that required prompt and energetic action and concerning which we were greatly puzzled.

This is not, by any means, a confession of ignorance or of inability. The physician who is never "stumped", like the physician who "never loses a case", probably has very good reasons—he may be fortunate in having neither difficult problems nor any "cases" at all worth speaking about. The physician who has at all an active practice frequently meets with unforeseen or difficult problems that may tax his resources to the utmost. When these difficult contingencies assume so serious an aspect as was the case during the height of the late influenza-epidemic, we are justified in acquiring a wholesome respect for a disease that can make it so difficult for us to see our patients safely through. There is no use talking. It was difficult, and it is difficult even now, in many instances, and it, by no means, is as simple

a matter as would appear from the talk of some who airily declare that they have never lost a case.—Ed.]

A COUNTRY DOCTOR'S EXPERIENCE WITH INFLUENZA

I like your "Lets Talk It Over" department and am going to prove my faith by my works, as I have had an experience with the epidemic of influenza a little different from any that I have seen reported, and, while I am not presumptuous enough to think that what I may say will very much enlighten any of your numerous subscribers, still, I will give my experience for what it is worth. I am only a country doctor, with more than thirty-years' service to my credit. During the past four months, I have treated between 500 and 600 cases of influenza, the great majority of these since Christmas, so that I feel a small degree of pardonable pride in the fact that I have had only 6 cases of pneumonia and but 1 death in all this number.

I have encountered three distinct forms of the trouble, namely: gastric, catarrhal, and neurotic, with the catarrhal predominating. Whenever I had a patient afflicted with all three forms at one time, as occasionally happened, I had my hands full, with a very sick patient, and was taxed to the utmost degree to meet the indications, and steer clear of breakers.

For the fever, I gave aconite, digitalis, veratrum, sweet spirits of niter, spirit of mindererus, as occasion demanded; but, I never used a single dose of the coaltar products, in any shape or form; and, to this fact, I attribute my success, as much as to any one thing, together with a "clean-out, cleanup, and keep-clean" policy, not only as to the alimentary tract, but, covering the room and every thing pertaining to the comfort and wellbeing of my patient.

For the intense headaches, I prescribed acetylsalicylic acid, but, with the alimentary tract thoroughly cleansed, and, with the intestinal antiseptics used afterward, a good many of the headaches disappeared. Which confirms my belief that many of the headaches were caused by an overloaded condition of the alimentary tract. I watched the heart and also the lungs closely, and, as soon as there was the least sign of weakness, I gave strychnine; then, if the lungs showed any evidence of approaching pneumonia, my object was, to do

all in my power to ward it off. In other words, I made it a rule to treat my patient, and not the disease, and to anticipate trouble, and to prevent it, if possible.

Whenever indicated, I gave small doses of calomel, frequently repeated, followed either by a laxative saline or by an enema of soapsuds in which was dissolved a tablespoonful of salt and soda. And this I found most effectual, especially where I was contending with the gastric form of the trouble. In many cases, there was very decided tonsillitis and pharyngitis, and, for these, I found nothing equal to a spray or gargle of chlorazene.

My dread of the coaltar products has been very much increased within the last few days. I was hurriedly called to a patient right near my home, and when I reached him I could find nothing the matter, except a very weak heart, with a pulse of only 40 beats per minute. He was an elderly man, stout, and robust-looking for a man of his age. Upon inquiry, I learned that he had been taking "cold"-tablets for some days, to ward off influenza, and, when I was shown the box, my diagnosis was cleared up, for, on the lid, I read that each tablet contained 4 grains of acetanilid. I do not know how many he had taken, as he did not know; but, I firmly believe that, if he had continued taking them till bedtime, he would have been dead by next morning; and then there would have been another reported death from "heart failure." The only use I have for acetanilid is, with equal parts of boric acid, used locally; and then it will heal anything that can be healed, except a guilty conscience.

The one patient I lost was a beautiful young lady, who never was in bed with influenza and never had a temperature of over 100 degrees, and I dismissed her on Tuesday, cautioning her that cases like hers were the ones that often gave most trouble, and for her to keep close and to still take the medicine for several days. On Friday following, she had a severe chill, double pneumonia developed, and she died in forty-eight hours. Two of my other patients that had pneumonia were pregnant, and right at the height of the fever and near the crisis of the disease, they were taken with labor-pains, and three hours before I could possibly reach them, all was over. Still, when I arrived, they were in better condition than when I left them the previous day, and both

have now recovered, although it was very slowly.

Another thing, I have had all sorts of occasions to observe its contagiousness, and I now am of the opinion that influenza is far from being as contagious as most of us first thought. And my ideas in this direction have been considerably strengthened since my reading the account of a Harvard scientist, who did everything known to medical science to transmit it from one patient to another, but failed. I now believe that it is an infectious disease, just as smallpox is a contagious disease, and that all this fear of contagion has been groundless. Still, it is a most mysterious disease, and, not being as thoroughly understood as most of the ailments we are called upon to treat, also confirms my belief, that very little medicine should be given, and that that which is used should be for a definite purpose, and when that purpose is accomplished, the drug should then be withheld.

And last, but, by no means least, we should give nothing whatever that will have the very least depressing effect upon the patient; for, the disease itself is depressing enough. On the other hand, we should sustain our patient all we can and constantly look out for impending trouble, and prevent, instead of curing, pneumonia, heart failure, and the many other complications, that make influenza the most dreaded malady that we have seen in this generation.

We all well know that influenza, in itself, is not so much to be dreaded as are the complications that follow it; and I do not believe that a single patient has died of influenza alone, but, that every case ending in death has been one of pneumonia, sometimes proving fatal before the attending physician again reached his patient on his daily round, and perhaps, within an hour after the disease had fully developed.

I failed to state that I gave codeine for the distressing cough, especially when attended with much pain; while, for the cough that persisted after the acute symptoms had passed, I found nothing equal to iodized calcium and calcreose, that is, when the stomach would retain these drugs.

We are living in a wonderfully progressive age, and, as we study more closely the workings of this disease, we should be correspondingly enlightened in regard to the

best method of treating it, and its various complications.

WILL B. CRAWFORD.

Goldsboro, N. C.

[In his outspoken opposition to coaltar products, Doctor Crawford overlooks the fact that acetylsalicylic acid, as also the sulphocarbonates are derivatives of phenol and, therefore, of coaltar. Rightly used, these preparations do no harm, but are of proved value. However, the Doctor has demonstrated that the indications present in influenza can be met satisfactorily by other appropriate drugs.—Ed.]

A CANADIAN'S EXPERIENCE WITH INFLUENZA

The great feature of your journal, to me and I suppose to many others, is the fact that the practitioners are, in your pages, given an opportunity to present their personal views upon all subjects of medical interest. I have been an attentive reader of your journal for several years and I am now sending you an account of the points of clinical interest that I have gathered, during the recent so-called influenza-epidemic, in the treatment of about 1200 cases. The fact that this disease has caused more deaths in a given time than any other in our generation makes it proper, to my mind, that it should be discussed in the medical journals in the fullest manner; and, as our greatest scientists are still arguing among themselves about the etiology and proper treatment of this disease, I feel that it still is a fit field for the clinician.

Observations on Symptoms.—While the majority of the cases are diagnosed on the strength of the frontal headache, elevated temperature, feeling of general malaise, and general soreness in back and limbs, there are many exceptions to this.

In a few cases, the most prominent symptom is, a violent pain in the epigastrium, so violent, indeed, that, in one instance, the patient ran around the house and only was quieted by a large dose of an opiate. In others, there is vomiting, and in some, diarrhea.

In some cases, I have noticed that the disease has run a practically afebrile course. I believe that these often are missed by the physician, but, fully noticed by the patient who often suffers from

hoarseness, sore throat, painful back, flatulence and a stomach that is unable to digest even the lightest food for some time. The wind on the stomach, I have found, may persist, after the main attack, at times, for three or four weeks and often is the cause of the patient's complaint of pain in the epigastrium and back.

In a few cases, the symptoms are very similar to those of typhoid fever, with a low-muttering delirium, coated tongue, moderate temperature, and quickened pulse, although the pulse rate is slower than the other symptoms would lead us to expect. The hemorrhage from the nose, similar in appearance to that seen in typhoid fever, I have found may come on at any time in the attack in about 20 percent of the cases and to vary in amount from a few drops to a pint. Some have repeated hemorrhages. Edward A. Foley, of Chicago, writing in the *Journal of the A. M. A.* for Jan. 18, says that he noticed the epistaxis occurred when the patient's temperature was high—104° to 105° F. I have found that it also may occur in the final stages of the attack, when the temperature is normal and the patient almost well again. Sweating is a very constant symptom of the disease, although in part it probably is owing to the large doses of aspirin often administered.

Observations on the Complicating Bronchopneumonia.—I am convinced that this complication of bronchopneumonia is present in a great many more cases than are admitted or recognized by physicians at the present time. In the majority of cases, in which consolidation was discovered, I have found it located at the bases of the lungs at first, then gradually extending upward, with moist râles, over the front of the chest. In some, the areas of consolidation are patchy and seem to appear and disappear sporadically.

It is remarkable how little discomfort this type of pneumonia gives some patients. Some, in a serious condition, with rapid breathing, will declare that they feel all right, while one man that I saw did his chores till the very day of his death and died with his clothes and boots on, he having had a very severe pneumonia for several days.

The Prognosis in pneumonia is very difficult to make; the pulse rate and respiration rate and temperature seem to be of little value—one of my pneumonia-patients

with a respiratory rate of 72 a minute recovered. Profuse expectoration seems to be a good sign in the pneumonia, and the fact that the patients sometimes expectorate a great deal of blood does not seem unfavorable. In a few cases, where the toxemia is a very severe and where the pulse rate is, say, 140 per minute; the respirations around 60 per minute, and the temperature about 104 degrees, the prognosis may safely be very unfavorable although the mental faculties may be good.

Many cases undoubtedly are those of pneumonia, when there are present: rapid respiration, pain in the chest, and bloody expectoration; in which percussion and auscultation give no definite signs of consolidation. These cases should, from the start, be treated as pneumonia.

Prognosis in influenza is greatly affected by the location of the patients if the death rates are correct as they must be mentioned in the reports in the various journals by physicians attending the large hospitals.

Patients in rural districts I believe had given a much lower death rate than in cities; small towns I believe give a lower death rate than large ones. This may be accounted for by the fact that the rural communities are better nourished on an average, have lived a more regular life and are not so exposed to cross-infection patients who will stay in bed from the onset.

C. E. N. DENMAN.

Leader, Sask., Can.

INFLUENZA—PNEUMONIA—FILTH —TUBERCULOSIS-IMMUNITY

The influenza-rush has been over for me for now three weeks, and I am glad of it—and I never want to see another case of it. Of course, I had a big experience, met new conditions, some of them easily handled and others entirely beyond the reach of medicine.

One form of pneumonia really phased me, and I was ready to throw up my hands and surrender every time that I encountered a case.

The first case of this kind that I saw was one in consultation, in which the attending physician was not certain that it was pneumonia. My decision was, that it was pneumonia in the worst form, and that it was immaterial what medicines were

being given. This patient lived thirty hours. I lost 3 cases of this kind in my own practice and one other convalescent case of bronchopneumonia. I saw 4 other cases in consultation and heard of several more, but, all these patients died in from twenty-four to seventy-two hours.

I never have liked to acknowledge that I was defeated, that I could do nothing more, that my resources were exhausted, and that I had nothing to offer; however, here, I met my Waterloo and my hands went up in surrender as soon as I saw one of these cases of pneumonia.

I attended and saw hundreds and hundreds, possibly a thousand, cases of influenza and a large number of cases of bronchopneumonia, most of which were easily managed, although some of them were tedious and hard to carry to convalescence. I saw no case of croupous pneumonia. Many of the patients were spotted. Some of the victims suffered a second attack, while one had the influenza and three distinct attacks of pneumonia, all inside of five weeks, and then got well in spite of me.

I used quite a lot of the mixed influenza-bacterins (of several makes) and also of the mixed influenza-serobacterin, for purposes of immunization against the disease. By way of treatment, I used influenza-bacterins, serobacterins, and mixed-infection phylacogen, besides remedies as indicated, both internal and external. (Eternal and infernal, the old woman called them.)

With a three-and-one-half months' fight with this epidemic, I thought that the loss of only 4 patients was a very low mortality rate, especially when we had no trained nurses, at times only one person to nurse an entire family of from 4 to 9 persons (many of them little children), do the nursing, do all the cooking, chopping the wood, milking the cows, and churning the butter, and so on *ad infinitum*.

Many times, also, the sanitary conditions were the very worst. Still, this factor seemed to have nothing to do with the recovery of the sick; for, often, where the sanitary conditions were the worst, there the patients did best and made the quickest and safest recoveries. This would seem to discount the need of cleanliness in sickness, even though we so strongly preach the absolute necessity of scrupulous cleanliness. Understand me, I do not advocate dirt and filth about sick people, for, I like

cleanliness, under all circumstances, as strongly as does anyone; yet, again and again, the filthy victims, in the most unsanitary surroundings, got along very much better than those cleanest and amidst ideal surroundings.

Moreover, I have had the very same experience in the confinement of women. As a rule, wherever the conditions had been most unsanitary, the bedding and clothing the filthiest, often under an old quilt that had not been washed in years and on which the dogs had slept, I have had the least trouble with puerperal infection, and the most rapid and best recoveries. My puerperal septicemias have nearly always been among the ultracleanly. However, understand, there are other factors that enter the sickroom besides cleanliness, and I appreciate those factors. Often, these factors outweigh cleanliness, care, medicine, and all else. I trust that you understand me clearly.

My experience has been, that those people to whom I have given von Ruck's anti-tuberculosis-vaccine are sick less than other people; they rarely have pneumonia, being, possibly, one out of every one hundred cases that I have treated; they very rarely have grip, and then it is only in the nature of a slight cold; all their other troubles are but slight afflictions and they come nearer staying on the job every day than do other people.

B. F. TERRY.

Rising Star, Tex.

[This writer has made the same observation as has Doctor Terry with respect to patients that were fully immunized against tuberculosis with the complete antituberculosis-vaccine of Doctor von Ruck. Of all those persons whom he immunized in this manner from one to three years ago, only one had an attack of influenza, with severe fever, but, which, subsided rapidly, the patient recovering promptly and perfectly. Others showed slight symptoms of "cold," this never extending beyond the upper respiratory passages and it did not develop in actual illness.

It is a common observation that persons immunized in the manner described no longer are susceptible to "colds" and to other respiratory affections. In other ways, also, they have acquired a greater resistance and a higher degree of good health than they had enjoyed before. This

individual observation is given for what it may be worth. This writer, though, is convinced that the fact stands in direct relation to the complete immunization against tuberculosis-infection—which many times is occult and unrecognized.—ED.]

DENTIST WANTED

Dr. R. T. Bolyn, 123 Main St., Berkeley, Street, Berkeley, Norfolk, Virginia, is desirous to have a competent dentist to locate in his town, of over ten thousand inhabitants, where, at present there is but one dentist. It would seem that this is a favorable opportunity for a good man, and physicians having cognizance of dentists looking for a location might do their friends a good turn by informing them of this chance.

WHAT DO YOU REALLY KNOW ABOUT HEALING THE SICK?

The editor has asked me to write a supplement to my article, "What Do You Really Know About Healing the Sick?" that appeared on page 230 of the March issue of this journal. The article was intended as an acid-test of what the average physician's actual practical knowledge. Among the large number of physicians of the United States and Europe, that have written me concerning that article, only one expressed the thought that he could answer my questions correctly!

In naming the indicated remedy, in answer to each question, I give that one that I have found, in my own practice, to be the best, the remedy that can be depended upon when given according to the indications named in my previous article.

1. When called to see a little child, the mother will tell you that "the child wants to be carried all the time, as soon as I go to lay it down, it cries." Recipe: Tincture of chamomilla, 10 drops in half a glass of water. Give one teaspoonful every hour.

2. A young woman tells you that she flows too much at the monthly period, the blood is dark and tarry, passing in clots. This condition indicates aurum muriaticum natronatum, 3X. (gold and sodium chloride). Dose, three tablets an hour after each meal.

3. Men at or past the middle age may have chronic enlargement of prostate.

Tincture of hydrangea is the remedy, 6 drops taken three times a day. Calcarea fluorica 6X is the biochemical remedy for this condition. I give three tablets of this remedy every three hours. These two remedies taken at the same time will do more for that condition than will any other medicine.

4. Spinal irritation is one of the most common diseases that we have; yet, very few doctors know how to cure it. There are tender spots along the spine; headache begins in the back of the head, passes over to the frontal region; knees feel cold, the palms of the hands burn, the toes quiver in bed at night, there is numbness in the hands or feet; also intercostal pain. I give tincture of belladonna, 1X, 5 drops every three hours; also 2 grains of quinine before breakfast; besides dialyzed iron, 15 drops after dinner and supper. With tincture of iodine, I paint a strip as wide as two fingers along the entire length of the spine, every night and morning, until the skin feels so sore that it becomes unendurable. This treatment I evolved for this condition in 1883, and I have cured a large number of patients with it, and have recommended it to hundreds of other physicians. The patient will begin to improve from the start.

5. For that particular form of indigestion mentioned in my question, and which is so very common among our American people, the remedy indicated is nux vomica 3X, three tablets every three hours.

6. Intercostal neuralgia calls for just one remedy, namely, specific tincture of asclepias tuberosa, 20 drops every two hours.

7. The patient walks the floor in agony, even after a soft stool. It indicates one remedy, namely, nitric acid 6X dilution, in 5-drop doses three times a day.

8. A case of chronic diarrhea in an old lady, who feels a desire for stool in the morning when she gets up and begins to move around. Prescribe natrium sulphuricum 6X, three tablets to be taken every three hours.

9. When ferrum should be prescribed, the face is ashy-pale in color, it flushes upon the slightest emotion, the tongue is pale; the pulse is a small, thin, empty one. Remember this rule: if iron does not increase the desire for food and the ability to digest it, then you will know that iron is not the remedy that your patient needs.

If you have in hand an obstinate case of anemia and palpitation of heart, where ferrum is indicated by the tongue and pulse, prescribe ferrum 3X, three tablets every three hours, in alternation with digitalis 3X, three tablets every three hours. I have seen fine cures effected with these two remedies.

10. Quickness of the pulse, without strength, indicates cactus grandiflora, 30 minimus of the tincture to be diluted with 4 ounces of water, and one teaspoonful of this to be taken every three hours.

11. A weak pulse, with a well-marked interval between the pulsations of the artery at the wrist warns us that paralysis has already taken place or is liable to occur in the near future. It indicates just one remedy, namely, kali phosphoricum 3X, three tablets to be taken every three hours.

12. Women at the menopause complain of hot flashes, faintness, perspiration. This calls for one remedy, namely, sepia 6X, three tablets to be taken every three hours.

13. Very often, enlargement of the womb causes some form of displacement. To reduce the enlarged uterus, give tincture of fraxinus americanus in 10-drop doses three times a day.

14. An old lady may consult you about an annoying condition: She passes urine involuntarily when she coughs or sneezes. This indicates causticum 3X, three tablets every three hours.

15. Mental trouble caused by an injury of the head calls for natrium sulphuricum 6X, three tablets every two hours.

16. The patient eats well, but, is losing flesh, and the pulse is rapid and intermittent. This indicates natrium muriaticum 6X, three tablets to be taken before each meal and at bedtime.

17. Bloating of the upper eyelids, swelling of the ankles, the patient has to get up in the night to urinate. This calls for kali carbonicum 6X, three tablets every three hours.

ELI G. JONES.

Buffalo, N. Y.

[We asked Doctor Jones to complete his paper of last month, because it was to be anticipated that the very confident tone of his remarks would induce many physicians to request further information on the subject. We wonder just what the readers of CLINICAL MEDICINE think of the remedies enumerated in the foregoing. Some of

them, without a doubt, will relieve the symptoms that are described as being so insistent. But, whether they will influence the underlying cause—whether they will actually *cure* the patients, as Doctor Jones asserts so positively, is another question. To this writer, some of the remedies appear to be just a little peculiar, and he would be sorry to have to depend on them.

—ED.]

AMERICA VICTORIA

Let songs triumphant fill the air,
Entwine with laurel wreath her hair,
With jewels bright her breast entwined,
Her glorious deeds in hearts enshrined.

Chorus:

America! Thou land of liberation,
Thy flag, unfurled,
Waves to the world
Morn's greeting of salvation.

Thy sons roused by thy stirring call:
"To arms!" had answered, one and all;
They joined the braves across the sea,
To fight for worldwide liberty.

Chorus:

America! thou land of liberation,
Thy flag, unfurled,
Waves to the world
Morn's greeting of salvation.

Though thousands fell in bloody fight,
Theirs was the victory of right.
Remember, while peace-banners wave,
Our sleeping heroes in the grave.

Chorus:

America! thou land of liberation,
Thy flag, unfurled,
Waves to the world
Morn's greeting of salvation.

P. ILGIN.

Lawrenceburg, Ind.

ANOTHER "DOCTOR BETTERMAN" PASSES OUT

Dr. Alexander L. Pomeroy died the other day at the advanced age of 97 years, after seventy-three years of service. During all this time, he lived in the same house, at the village of Windsor, Ashtabula County, Ohio, and, until shortly before his death, went about attending to his patients. Such a record as this is worthy of notice. I am sending the facts as a tribute of love and respect, and to acknowledge many obligations.

Dr. Pomeroy began his study of medicine in 1840, at the old Cleveland Medical

College. The village of Windsor is about thirty-five miles east of Cleveland. At that time, there were no railroads, no automobiles, no electric lines. The easiest way was, to walk, which the young student did, carrying his carpetbag in hand, back and forth each two weeks of the sessions for "lectures." He was graduated in 1845, and since then his shingle has swung to and fro in the wind of his native village—seventy-three years in the harness!

Turn back the pages of medical history for seventy-three years and list its accomplishments. Eagerly this old-school doctor followed each step of progress, the advent of anesthesia, antisepsis, the antitoxins and the vaccines. He once said to me, perhaps twenty years ago; "It keeps us old fellows hustling to keep up to date these days." How kind he was, how teachable, how eager to learn! I saw him many times while I still was a medical student, and he would quiz me by the hour about things we did at school, about new methods of diagnosis and treatment, and the like.

If any one doctor was the source of inspiration that prompted the writing of "The Letters of Dr. Betterman", it was Dr. A. L. Pomeroy. His character, personality, and life-philosophy made him unique in this age of heartless hustle and relentless efficiency. On his grave, let us lay a wreath, with "R. I. P." shown in large letters.

C. E. B.

Youngstown, Ohio.

[The "Letters of Doctor Betterman", which are referred to in this communication, were published serially in Allbright's *Office Practitioner*, some years ago, and were discussed in CLINICAL MEDICINE for September 1910, on page 935; also in June 1911, page 696. These letters, which are available in book form, should be read by all physicians who are desirous of making the best of their opportunities in so far as they wish to be true physicians. They are an unfailing source of inspiration, of comfort, and encouragement.—ED.]

A GOOD WORD FOR HOMEOPATHY

I have read Doctor Kennan's article in the January number, page 56. The Doctor says that he is a Homeopath. I also am called a Homeopath, although, as a matter

of fact, I am nonsectarian, having had the opportunity of being graduated from the regular, the homeopathic and the osteopathic schools. Each one of these systems has its sphere of usefulness.

Your journal is somewhat eclectic, upon an alkaloidal basis. It contains much of Homeopathy and shows the effects of homeopathic prescribing in what might be called the lower potencies or even approaching physiological doses. This field is rather neglected by the homeopathic writers.

I fail to see any reason for the antagonism of the regular school, to Hahnemann and Homeopathy, in refusing to give credit when that system is so much in vogue and its advocates and writers apparently are so much quoted and copied from. Surely, all investigators deserve recognition, even if they may not happen to be just "orthodox." I have about concluded that it is lack of correct information about these branch schools that accounts for the adverse attitude of the regular school.

E. M. MORGAN.

Westmount, Quebec, Canada.

RESUSCITATION-ATTEMPTS AFTER DROWNING

At * * * *, Florida, on February 7, a number of tourists were bathing in the surf of the Gulf, when one of them, a strong, athletic man of some fifty years, weighing perhaps 180 pounds, suddenly stopped swimming and sank within ten feet of other bathers. Help was summoned and probably fifteen minutes elapsed before he was laid on the beach and efforts at resuscitation were started. An empty barrel being convenient, he was placed across it, to expel the water, if any, from the lungs; none, however, was reported as having escaped. I was a mile away and a motor launch came for me, so that it was at best a full hour before I arrived. When I first saw the man, he still lay over the barrel, with head only six or eight inches above the sand. His face was intensely cyanosed and edematous, and the tongue protruding, and I came very near speaking out, "He is dead already," when his sister-in-law whispered into my ear, "Don't tell his wife so, doctor, but, work."

So, I ordered the body removed from the barrel and placed upon the sand, and I

continued to make respiratory movements, the woman meanwhile closing the nostrils and blowing into the mouth with the inhalatory movement. I gave no medicine, nor said anything about giving any, as the body already was deathly cold, although well wrapped in blankets and rugs, with hot bricks and bottles filled with hot air all around him.

In about another hour, another doctor arrived and began to read from a book and every ten minutes put a granule (presumably Abbott's) on the dry tongue, which was being drawn out for the blowing-in. When I asked, in an aside, "Why don't you tell them that he is dead?" the reply was, "They won't have it."

At about the third hour, someone had brought a hypodermic syringe and 4 tablets of strychnine, 1-60 grain each. I told them to fix up three of the tablets, and I injected this dose into the now rigid body. In about fifteen minutes, I was handed the remaining tablet and I injected that also.

By the third hour, the ankles and elbows were stiff, so that I could not bend either. Still, the women said, "Don't stop," and we continued our efforts. The woman asserted that she knew of a drowned person having recovered after six hours of effort and the people insisted upon the extra two and one-half hours of work before they would yield.

At the end of *eight and one-half hours*, the relatives yielded to the inevitable, and at last we could rest from our labors. The other doctor was soon gone, but, when I spoke of leaving, I was requested not to go. So, I stayed till the body was placed on a boat on its way home, and I was invited to come along on the same boat. I was an entire stranger, and it looks to me as if I had done nothing in a medical way to deserve this confidence.

Only a few months ago, we had an almost parallel case here, so far as appearances and result goes.

A man did a hard day's work and within half an hour put on a bathing-suit and sprang into the water. In about half a minute, he called for help, floated some 25 feet, caught a horizontal chain about a foot above on a schooner and fell face forward over the chain. He was taken off in about two minutes more and we had him on the dock, working with him. He, too, was blue, no water came from his mouth; he had no pulse. No hypodermic nor car-

diac stimulant was obtainable within miles. We worked one hour, then gave up.

— Fla.

[This case is remarkable only because of the absolute waste of perfectly good time employed in attempting the resuscitation of the drowned man long after life was definitely and positively extinct. Of course, it is recognized that most of the waste effort was dictated by the laudable desire to assure the wife and other relatives of the unfortunate man that everything possible had been done to restore life. Still, it seems that kindness and the desire to fall in with the wishes of the relatives may be carried too far, and it may be questioned whether the kindness of the act is real; whether it would not have been better to yield to the inevitable when this was fully demonstrated. When rigor mortis has set in, it is not thinkable that life can be restored.

However, our correspondent certainly has the highest record, so far as we know, as to the time spent in unremitting efforts at resuscitation. In a pamphlet published by the Public Safety Commission of Chicago, entitled "Safety First", two hours is given as the longest time during which resuscitation need be attempted. Schnirer and Vierordt's encyclopedia of practical medicine mentions "several hours, until exhaustion of physician and assistants". When so much time is occupied, one might think that it would have been possible to secure an electric battery and try the effect of faridization or of other electric stimulation. This, while in all probability futile, in particular instances might produce results, although only then when instituted sufficiently early.—En.]

THE SKEPTIC IN MEDICINE; A HINDRANCE TO THERAPEUTICS EFFICIENCY

That the skeptics in medicine appeared upon the horizon from the very beginning of medicine, there is abundance of evidence. That they have been a grave drawback to the rapid advancement of therapeutics, can not be successfully denied. These doubters are far more skeptical toward therapy than toward any other branch of medicine; when, in fact, there are many branches in which their unbelief would find

much more justification. How any man, and particularly a doctor, that professes to be educated, can assert that there is no virtue in drugs for curing disease, is beyond my conception. They seem to have forgotten that, especially in therapeutics, science has made wonderful advances. But, because the operation of a few drugs is not as plain to them as the noonday sun, they doubt the value of all treatment and unreservedly condemn every remedy. This skepticism could (to a certain degree) be overlooked in men who are just beginning the study of some difficult science; but, to have it eternally bobbing up in therapeutics, is discouraging.

It is true that, in any body of scientific men, there will always be found more or less skepticism on whatever subject they may investigate; but, the degree will depend upon each individual's experience and knowledge of the many facts involved in the problem under consideration. Consequently, there are likely to be encountered many degrees of skepticism on all subjects into which enters the slightest element of uncertainty. Thus, there was ground for doubt in the use of drugs to cure disease in the earlier days of medicine; but, the proof of their curative value is now so overwhelming that one can not understand why there still should remain any doubting Thomases. Such men were common a few years ago, but, their number is rapidly diminishing, and they probably soon will disappear. New discoveries that compel them to change their attitude are coming thick and fast, and soon they will drop out of sight.

Who will maintain that we are not able, by the intelligent use of drugs, to change a serious pathological condition into a normal physiological one? The evidence is overwhelmingly convincing. But, suppose that it was true of only a few or even of only one, then no reasonable person can doubt the possibility of the time coming when it will be found true of the majority or of all drugs and diseases.

Medical nihilism has been nurtured through a lack of knowledge on the part of the individual doctors. One prescribes certain drugs for what he *believes* to be a certain disease. He has been told that a given combination of drugs will cure that disease; he gets no results, and then he swears that the thing is not so. However, he has mistaken, say, typhoid fever

for malarial fever and he undertook to treat the former with the remedies of the latter. How, then, could he succeed? He has read that bacterins will cure pneumonia. His first case is caused by the pneumococcus alone, he administers the bacterin, his patient recovers. His second case of pneumonia is one of mixed infection; he employs the same treatment as before; his patient dies. Then he swears that the whole thing is a fake. He never once considers that an error in judgment, on his part, might account for his failures.

If we administer remedies in an appropriate manner, as, for instance, giving quinine to a malarial patient during the rise of fever, instead of several hours before the expected chill, we surely will be disappointed.

Every schoolboy knows of the efficacy of quinine in intermittent fevers, and, yet, we all have seen it fail in certain cases. In what lies the failures? Is it the quinine, is it the patient's condition, or is it the prescriber? It may be in any one of these or it may be in a combination of them all. The quinine may be adulterated; the patient's condition may be such that the drug was not utilized by the system, or the prescriber may have erred in many ways.

But the medical nihilist will never acknowledge any of these possibilities, especially the one that he, himself, may have made a blunder.

The whole theory of therapeutics is a failure to him. A few men of this class are so narrow-minded that they think other physicians should believe as they 'do. Some of them go further and tell the laity that there is no virtue in the drug-treatment, but, only in, say, their adjustment of vertebrae, or whatever their "ism" or "opathy". In speaking of these things to the laity, they take good care to put emphasis upon such words as will impress the listener with the value of their own trade and discredit the ability of the regular physician.

The day will come when our knowledge of the cause of disease will be more accurate, and then we can prescribe with precision and the results will, accordingly, be more brilliant. If we knew the cause of

every disease and the cause of every complication of that disease, we might expect to be able to prescribe our remedies with such direction of purpose that we could with certainty expect definite results.

Be this as it may, is there not abundance of proof to satisfy the most exacting critic? Does the man who expresses himself skeptical on the effect of all medicines doubt the efficacy of parasiticides in destroying parasites upon the skin and mucous membrane? Does he deny that intestinal parasites of various kinds can be expelled or destroyed by administering the proper tenicides? Does he deny that aconite will reduce high arterial tension, soften the pulse, and bring down a high temperature? Does he deny that iodized calcium will arrest acute bronchitis and save the life of a baby that is being smothered by croup? Does he deny that lobeline will relax and reduce a strangulated hernia when every form of taxis has failed? Does he deny that apomorphine, hypodermically, will empty the stomach unceremoniously? Does he deny that emetine will cure amebic dysentery or that it will cure Riggs's disease? Does he deny that coryza and bronchial catarrh can be aborted by inhaling the vapor of a 10-percent chloroform solution of menthol? Does he doubt the value of thyroid-therapy in myxedema?

But, why multiply examples? They could be extended until they filled pages of this journal. Let him try any of the drugs named, making no mistake in diagnosis and giving the required doses at the proper intervals, and there is no doubt that his skepticism will disappear definitely and forever.

For men that pose as educated to assert that all the ills that flesh is heir to can, if curable, be treated successfully by hygienic measures, supplemented by manipulations and massage, is the height of folly. Please, tell me what hygienic or mechano therapeutic measures will expel a tapeworm or other like parasite from the intestinal tract of man? What hygienic measures or manipulation of subluxed vertebrae will arrest the spasms and carry the patient through after taking an overdose of strychnine?

Is more proof necessary?

C. W. CANAN.

Orkney Springs, Va.

After the World War

LETTERS FROM FRANCE—VIII

Paris has had, in the past, many occasions for showing how warmly it can greet royal visitors; however, yesterday it surpassed itself in hailing Britain's king. Despite the rain that had fallen steadily since early morning, Parisians turned out in tens of thousands, and the cheers that rose to mighty roars as the royal party drove down the avenue du Bois de Boulogne, the Avenue des Champs Elysées, and across the Place de la Concorde came from the very hearts of the French people and showed how profoundly they recognize the stupendous efforts of their Allies in the war and the magnificent deeds that have won immortal glory for the khaki-clad troops of the British Empire. When at last the avenues were cleared, half an hour before the cortège passed, the people stood densely packed on either side more than twenty deep.

The eager crowds pressed heavily upon the cordon of police, placed behind the mounted troops that lined the route—men straight from the front, drawn from thirty different regiments of General Debeney's Army, the same that fought with Rawlinson's British Army in the famous battles of Mount Kemmel and elsewhere. Khaki-British and Khaki-Americans were conspicuous among the throng of spectators, men from Pershing's Armies being very numerous and no less enthusiastic than the rest of the crowd.

From the Place de l'Etoile, the scene was extremely impressive. As the cortège advanced, at a slow pace, up the Avenue du Bois, the cheering gradually rose into a tremendous bellow and then fell as the royal carriages proceeded down the Champs Elysées. The spacious avenue was bounded on either side by a sea of umbrellas, which were being wildly agitated as their holders greeted the passing king. At one point, at the corner of the Avenue Nicholas II, an enclosure had been set apart for British soldiers and civilians,

and the great joyous whoop, led by several hundred Tommies, that was sent up from this spot, caused the King to turn sharply as he recognized the home-cheer.

American cheers, too, were heard all along the route, and they were given with a will and lustiness easily recognizable. The king and the princes saluted and smiled continually in response to the cheering and seemed highly delighted with the cordiality of the welcome.

All of the buildings lining the route were gaily decorated with allies' flags and bunting, but, none more profusely or artistically festooned than the Great Hôtel Place Elysées, a structure covering an entire block and serving as the headquarters of the American Army. All of the windows facing the Avenue des Champs Elysées were opened and balconies crowded by the officers forming the personnel and their friends. As the king's carriage came to pass this building, there went up a concerted Yankee yell that caused him to look up. When President Poincaré informed him of the character of the building, the king turned and partly arose from his seat bowing and saluting, whereupon a stentorian voice called, "Come over to New York and we shall give you the time of your life." The king laughed and turned, again bowing.

When the king drove through the city to receive the homage of the Municipal Council at the Hôtel de Ville, it was through densely lined lanes of Parisians, enthusiastic as ever, even under their depressing black roof of dripping umbrellas.

The reception of the king and his soldier sons by the Paris Municipality was a particularly brilliant ceremony, for which the interior of the Hôtel de Ville had been magnificently decorated by an army of workmen, who had kept at their task night and day since Wednesday. A great awning of gold-embroidered red velvet stretched from the main entrance across the courtyard and pavement. Inside, the spacious hall, had been transformed into a wonder-

fully arranged winter garden, with huge plants, masses of flowers, and hundreds of tiny electric lamps.

The reception took place beyond, in the Salle des Prévots, also beautifully decorated. A crash of cheering from the thousands of spectators marked the visitor's arrival at three o'clock. Beneath the awning, President Poincaré, Lord Derby, and a number of other officials met the king and princes and led them to the Salle des Prévots, as a French regimental band played "God Save the King". Standing near Mercie's "Gloria Victis", the visitors, before a vast assembly of ministers, members of Parliament, ambassadors, city councilors and others, were greeted, in the name of Paris, by Mr. Adrien Mithouard, President of the Municipal Council. M. Antrand, Prefect of the Seine, also spoke words of welcome to the king and his sons. The king responded in a brief speech, thanking the City of Paris for its magnificent welcome and congratulating it upon the splendid example of coolness, courage, and confidence it had offered throughout the war. The king and princes then signed the Livre D'Or of the Hôtel de Ville, after which toasts were exchanged in the Salle des Fêtes.

The expenditure of the Red Cross in England, for 1917 and up to June 30, 1918, including the contributions to the British Red Cross and Ambulance Committee, totals \$4,313,566, according to the latest report of the War Council relative to the use made of Red Cross Funds. Prior to October, the work of caring for the American troops was performed by the London Charters of the Red Cross, at a cost of \$493,459. This amount included \$39,612 that was expended for the relief of the Cania survivors. For the work of the United Kingdom during the last half of this year, \$4,483,800 was appropriated by the American Red Cross. The policy of brigading American troops with the English has greatly increased the expenses. Three new Red Cross hospitals in England, one with a capacity of 3,000 beds, are nearing completion. The hospital-service required \$969,382 up to the end of June, and \$1,431,000 was set aside for the Christmas presents to soldiers. Special appropriation of \$429,300 was made for the canteen-service in the United Kingdom. The

sum of \$71,500 was appropriated for the Home-Communication service, which was calculated to keep soldiers in touch with their relatives in America.

The Red Cross is equal to any emergency. "Send fifty women at once." This call came to the American headquarters in Paris. "Canteen-workers needed on the Lorraine front, to feed the boys as they go up to the lines and the wounded as they are brought back. The few women that are in the section are working sixteen hours a day and are feeding thousands, but, they are unable to cope with the rush. We must have at least fifty. It is not a steady job, but, an emergency-affair."

Volunteers were called for and the necessarily complicated machinery of passes was set in motion. Forty-eight hours after the call had been received, thirty workers were on their way. Two days later, the complete quota had reported at places back of the front where they could be useful to the tired and hungry American boys.

The women were recruited from regular canteen-workers on transit from one post to another, from new arrivals from America not yet assigned to permanent duty, and from makers of surgical dressings.

What promises to be one of the most successful athletic contests arranged in the Paris district is, the track- and field-meet organized by the American Air-Service, Paris District, at the Croix Catelan, Bois de Boulogne. This beautiful spot in the Bois is the home of the Racing-Club of France and has been turned over by that organization for the American games.

As the entries include a number of well-known former college track-men, the various events will be hotly contested. Among the scheduled events, are the sprints from 100 meters up and a 1,050-meter relay-race. There are several events, including the 100- and 300-meter races and tug-of-war, these open to members of any of the branches of the Allies' services in the Paris district. All entries are to be forwarded to Major R. M. Colt, American Air-Service, 45 Avenue Montaigne, not later than today.

Among the officers of the American Air-Service that are supervising the meeting, are Colonel Halsey Dunwoody, Commanding Officer, Air-Service, Paris District;

Major Edmund Gros and Captain Marshal F. Mills. The proceeds of the meeting will be donated to the American Hospital at Paris.

As an added attraction, a well-known military band will provide a continuous program of real American music.

The following events are open for enlisted men in any way of the various branches of the Allies' service in the Paris District: 100-meters flat race, 30-meters flat race, tug-of-war.

Open to officers only: 100-meters flat race, 300-meters flat race, 1,050-meters relay-race (5 men to a team), sack-race, potato-race, three-legged race, tug-of-war.

Owing to the prevalence of influenza in Paris, the schools are being cleaned and disinfected. Many parents have suggested that the heating of these buildings should be begun at once, as a preventive measure, instead of waiting for the usual date.

Army-doctors are to be delegated to attend patients among civilians in cases where the ordinary practitioners are unable to cope with the situation. On Saturday, one English medical man practicing in Paris attended 34 cases, nearly all of influenza. The erection of frame buildings as temporary hospitals has been proposed by M. Henaffe, a member of the Municipal Council.

The provincial authorities are taking measures to check the progress of this dire disease. All the schools in the department of the Allier and the city of Dijon have been closed until November 4. The Mayor of Dijon has also ordered the daily disinfection of cafés, restaurants, and postoffices. The Admiral-Superintendent at Toulon has given orders for a general disinfection of public places, and has appointed officials to see to it that the orders are carried out.

A telegram from Rio de Janeiro states that, in consequence of the epidemic of influenza, all the public offices have been closed for three days.

A woman, one of 30,000 British working for the Y. M. C. A., was assigned to scrubbing the floor of the Eagle-Hut in London. She had done little manual work in her life, but, accepted the job without protest and went down on her knees with a pail of hot water, a cloth, and a cake of

soap. Soon, the water in the pail was black. A man in uniform passed. The woman looked up and asked whether he would mind emptying the pail and refilling it with clean water. There was a theatrical pause, then this reply:

"Damn it, madam. I'm an officer!"

This time, there was no pause, but, like a flash, the scrub-woman retorted:

"Damn it, officer, I'm a duchess!"

Some of the persons that, in the course of the outbreak of rabies in Devon and Cornwall, have been bitten by infected dogs, have been sent to the Pasteur Institute in Paris for treatment. There is no institution in England in which the Pasteur treatment can be administered.

It is estimated that there are 77,000 dogs in Devon and Cornwall. Muzzling is in force there, and in the event of the disease spreading, it may be necessary to extend that measure to as many more. Muzzles are being made as fast as possible. Animals affected during the outbreak include geese, cows, pigs, and goats.

Influenza, in many instances followed by septic-pneumonia, is spreading throughout the United Kingdom. Many deaths are being reported in Glasgow, Bristol, Gloucester, Midland manufacturing centers, and by Devon holiday reports. Scores of cases are reported from Tottenham, Edmonton, Richmond, and Wood Green.

Probationer Nurse Micael, of Glasgow, and Nurse Evans, of Carmarthen, who died from influenza, which they caught while nursing patients at Edmonton military hospital, were buried with full military honors, in the Heroes' Corner, at Tottenham Cemetery. The outbreak in the district is very serious nearly 4,000 people, it is estimated, being affected.

As a rule, influenza is not at all a fatal disease, only 1 person dying out of 200 attacked. However, the present epidemic is extremely violent and fatal, mainly because it so often runs into pneumonia.

It is necessary for everyone to be extremely careful. Everything that lowers the vitality should be avoided, such as overwork, fatigue, chills, and getting wet. The attack is so sudden that precautions should be taken directly the first symptoms are noticed. The cases of collapse in the streets probably result from people going

out after they have had warning symptoms.

An inquiry held by the French military undersecretary for health shows that malarial patients in the habit of taking quinine are less susceptible to influenza than are others, and that when they are attacked the death-rate is much lighter.

In a paper read at the Academy of Sciences, it was maintained that an attack of the disease renders the patient immune, at least temporarily.

Detachments of engineers from General Gouraud's army, exploring the region from which the Germans have been driven in the Champagne, have discovered, in many villages, most significant evidences of the method with which the destruction of habitations, churches, and other public buildings was organized.

The region of the Retourne, which was outside the fighting-zone, abounds with indications of wilful devastation. Villages that were never in range of the French artillery were found razed to the ground; others, where houses were still erect, were mined for slow destruction, while purely military installations, such as the barracks built by the Germans for their troops were left intact.

The order of the burning of Juaiville, a large village in the valley of the Retourne, where they had established most comfortable quarters, with casinos, officers' clubs, moving-picture shows, hotels, and rest-houses for soldiers, arrived the day of the evacuation.

The inhabitants supplicated the officers to spare their homes, but, the torch was put to every house. The village was one vast brazier when General Pont entered it with his men. Mont Saint Rémy shared the same fate.

Chatelet, Alincourt, Bignivourt, and Ville-sur-Retourne were partly saved because the French troops pressed the Germans there so closely that the sappers left behind to do the work were surprised. Some of these men of the destructiondetachments fled before they could set off the mines that had been prepared in advance, others were captured.

It has been necessary for the sappers

and miners to explore the cellars of every house remaining standing in the region, and, under most of them, mines have been found. The mouths of the wells were mined, so that their explosion would fill them with earth and rock.

At Ausance, were discovered a number of cases of prepared mines labeled to indicate the class of destruction for which they were intended. They were provided with glass tubes containing a corrosive liquid, designed to eat the wire connection with the mine and thus to cause its explosion within a lapse of time that was indicated on each tube. Some were marked one hour, others, two, twelve, twenty-four or seventy-two hours.

The destruction of most of these villages was prepared in the presence of the inhabitants, who implored in vain that they be spared, as at La Neuville, where an officer replied to one of the villagers: "I know it is an ignoble task, but, such are our orders."

Vice-Admiral Fournier and the members of the Committee of Direction of the Interallied Club, at 33 Faubourg Saint Honré, gave a reception in honor of the British Fleet and Army, which took the form of a renewed demonstration in celebration of the recent victories.

The President of the French Republic and Mme. Poincaré were present, to assist in making the occasion one of rejoicing over the British victories and to help show the British officers of the Army and Navy their keen appreciation. The program was opened by the playing of the "Marseillaise" when the President and Mme. Poincaré entered.

M. Paul Deschanel, President of the Chamber of Deputies, delivered a stirring address, in which he stated what the British Army had accomplished since August 8 last. He gave the actual figures of guns captured, the number of prisoners taken, and the number of towns liberated. Every figure pronounced seemed so absolutely unbelievable that each statement was received with a burst of enthusiasm from the gathering, which was composed of British, French, Americans, Belgians, and others of the Allies.

[*To be continued*]

Just Among Friends

A DEPARTMENT OF GOOD MEDICINE AND GOOD CHEER FOR THE WAYFARING DOCTOR

Conducted by GEORGE F. BUTLER, A. M., M. D.

[Concluded from March issue, page 242.]

GO, look into the annals of the world's great movements and say whether there be one people's song, one battle-cry, one oracle of gods or voice of gifted orator that can touch us like the trembling, ineffable pathos that rose upon the midnight air from the sainted garden of Gethsemane. From that solitude of agony, dawned the sublimest hope religion has offered to man. When Florence spurned her noblest son, it was in the solitary shades of Ravenna that Dante perfected the immortal poem, "that medieval miracle of song," which under the favor of princes might never have been uttered. What social distinction had ever moved Petrarcha as did the retired landscape of his beloved Avignon, the peaceful streams and sunlit vales of which filled his imagination with chaste longings, till his heart poured itself away in plaintive melody?

In the solitude of physical darkness, was Milton's spiritual vision deepened and refined. In the solitude of silence, was the soul of Beethoven thrilled with harmonies divine. In the solitude of intellectual fervor, sat the mighty Kepler and read in the answering stars above him those primal laws of matter and force which constitute the grandest achievement of speculative thought. In the solitude of communion with the beautiful, creative fancy guided the chisel of Praxiteles, the pencil of Raphael, and vitalized the slumbering genius of a continent, till, like sunlight from eclipse from the dread twilight of the middle ages, burst forth upon a rapturous world the splendor of the renaissance. In the solitude of a prison-cell, John Brown looked back upon the melancholy sacrifice of life and happiness, and was comforted by the "little golden rule" that could not be silenced while oppression darkened the land.

What do not we who rejoice in the amenities of society owe to the quiet heroism and abnegation of solitude! And, of

its healing power, who of us is so wedded to the world as not to find in the ruined places of memory some grief-wrought recollection. In the shadow of bereavement, in the still anguish of spiritual conflict, in the long watches by the bedside of those who are patiently nerving themselves to go alone, there is little room for the buterfly gladness of society.

However, there is a solitude of temper which brings with it its own retribution: a bilious aversion to society whose bitterness turns every wholesome influence to gall. One can feel sympathy with "melancholy Jacques," love-stricken and forlorn, confiding his amorous secret to the trees and rills—it is but the fine madness of which most hearts are susceptible. We can look with forgiving pity upon the pathetic hate of Timon, betrayed, deserted by his friends, and doomed to the loneliness of an Ishmael. But, this preternatural gloom which haunts the very vestments of our society-hater, this self-consumption that would shut out from us the light and warmth of the affections and hang heaven itself with the drapery of its woes—away with it to its mountain-caves and monastic crypts!

Better far the levity of smiles, the nonsense of "Pinafore" than the pestilentia! atmosphere of such saturnian night. Occasionally we meet with those ravens in our midst—calm, emotionless creatures, who appear to have descended from their heights or emerged from their burrows, only to view society as an interesting spectacle of human folly, a Vanity Fair, to be witnessed with complacent disdain. One is tempted to push them into a bridge-whist party or the latest enormity in parlor-games; for, notwithstanding their presence among us, they can not disguise the fact that they are not of us, but are dwellers in somber, selfish deserts projected upon their own morbid imaginations. They suggest Tom Paine's remark of the Quak-

ers—happily far from their true sentiments today—that, "had their wishes been consulted, not a flower would have bloomed, not a songster enlivened the woodlands." In dealing with them, we would summon the Christian patience, and the acme of wrath, of the London cabman who, seeing his vehicle perforated by the pole of a passing coach, so far suppressed his feelings as to bow politely, accosting the offender with, "Please, sir, how do you like London?" Fortunately, however, a professed misanthrope is a *rara avis* among men.

Above all, let us not be overhasty in judging the wallflowers of society. Perhaps yonder seriousness is but a veil of withered leaves concealing a fountain of tender tears. Who would be guilty of wounding by untimely railillery the heart that has crept among us, perchance, to listen lovingly and be cheered by the remembrance of a mirth that can waken no more? It often seems to me there is a tragic element in the gayest company. The laughter and buoyancy are there, but, who can tell what shattered dreams, what years of hopeless yearning have saddened in secret the eyes now brimming with delight! Here, again, experience and feeling warn us to tread softly, for our foot may stand on a grave.

It was tedious, though instructive, to examine in detail the varying elements of social life, the goodly bore, the flatterer who would miss the point of witticism, that "soft soap would be a very pleasant thing, were it not for the lye in it"; the shortsightedness that substitutes for kindly pleasure the meanness of satire; the shocking faculty of saying disagreeable things, the sin of which, to be sure, lies in absence of perception rather than in conscious injury, and is, therefore, to be forgivingly tolerated as a pitiable idiosyncrasy. These, and many more, mark the diversity of character that surrounds us—to be studied and compared, that we may know our kind and weigh them with an even hand.

There is one class of persons—seldom encountered, to be sure—whose character baffles analysis. I mean the men or women who assume a false role in society—whether from cynical indifference to other's opinions or from caprice. They are

grave or gay in turn, according to the whim of the moment. They rejoice in inconsistency and relish keenly the discomfiture of those who would unmask them. They are almost the only members of society that knowledge of the world is powerless to resolve, and as such often the most attractive. A while ago, our friend in black was moping in the corner. Here, he is fairly entangled in the meshes of Miss Sunbeam's snare—and we all know what an unconscionable coquette *she* is. He can be so agreeable! Yet, his defiance and rudeness often render his company quite the reverse. With Miss A., he has been ridiculing Howells; with Miss B., he maintains that in him Hawthorne lives again. He detests dancing, yet, this is his fifth waltz. Early in the evening, he withdrew, apparently in solemn scorn of the company; here, he is, at eleven, bright as a boy and the center of the liveliest group. Miss C. thinks him "perfectly odious," and quotes Dickens "the densest idiot I have ever seen at large"; Miss D. is overwhelmed by his learning and says as much as she dares in his favor.

Now, all these little contradictions may be shallowness and misanthropy; yet, there are persons in whom they indicate only versatility of temperament combined with a half-guileless love of satirical humor—and, which character they really impersonate, it is not always possible to assert with confidence. I have mentioned them in this connection simply because I suspect that their favorite game of life is solitaire, and the eccentricities of their behavior have their origin in dissatisfaction with the world because of being ill at ease with themselves.

Lastly, there is a phase of solitude of which I would speak with especial reverence; I mean the solitude of converse with the divinity that calls to us in the far murmur of forest-boughs, that breathes to us of an eternal calm in every whisper of the wandering winds, that strews with floral gems the sod beneath our feet. In the recesses of silvan shades, in the tranquil light of summer fields, in the cool sanctuary of a streamlet's bank, one feels the force of Roger's sentiment, "Never less alone than when alone."

Nowadays, there are religious skeptics abroad who thoughtlessly inveigh against what they term "pantheism," who would

strain the pure wine of life for a harmless atom of God-given adoration and swallow a mountain of bigotry and ignorance. In vain is it to seek to divorce the loveliness of the material world from its Creator. *They are one*; and, though the voices of the forest come to us not in ritual and everyday cant, they are none the less potent in their influence upon the soul. Ere the footsteps of man were heard on earth, roses and violets were blooming, and, when man shall be no more, they will remain, to shed their fragrance o'er his grave.

—
Stand upon an airy summit alone and look off over the sunlit landscape bathed in rosey effulgence. What endless lines of beauty so harmoniously interwoven, what varied enchantment of form and color greet the eye! Your day among men has been dark with many doubts; the tired struggle for existence has filled you with dismay; all that is most engaging in human relations has failed to reconcile you to the inevitable mystery which almost seems the primary condition of life. Here, all is peace. The leaflets are as a soothing benediction; no brooklet of Arcady was more musical than that which pulses of the evening breeze bring to your ear; and beyond, the hills and valleys stretch away to the softly tinted horizon, while over all there rests a sacred calm as if the world were kneeling, listening to the vesper prayer of

nature.

Do I hear you say, with the hero of "Maud"; "Below me, then, is the village, and, look, how quiet and small! and, yet, bubbles o'er, like a city, with gossip, scandal and spite?" But, its distant jar is drowned in the psalm of nature; only the good and true and noble shall follow you to this hallowed retreat. You need not read Ruskin and Wordsworth to catch the echoes of the universal song; they pour through the woodland arches everywhere and are wafted to you from each leafy lyre that vibrates to the wood-god's touch. The scent before you can not be weighed and measured; all that elevates you to unconscious rapture is purged from earthly stain, even as your heart responds more gladly to the serenity of that you now behold; for, there is hellebore in every draught of this free air. You say, you are moved only by a vision of natural loveliness—but, it is the soul of beauty in you that answers to its own.

I have, perhaps, lingered too long on these rambling impressions. All I have said, all I even could say, must seem poor, indeed, beside this simple golden thought from Emerson:

"It is easy in the world to live after the world's opinion; it is easy in solitude to live after our own; but, the great man is he who, in the midst of the crowd, keeps with perfect sweetness the independence of solitude."

*O SOLITUDE! If I must with thee dwell,
Let it not be among the jumbled heap
Of murky buildings; climb with me the steep,—
Nature's observatory—whence the dell,
In flowery slopes, its river's crystal swell,
May seem a span; let me thy vigils keep
'Mongst boughs pavilion'd, where the deer's swift leap
Startles the wild bee from the foxglove bell.*

—Keats.

Among the Books

ZINSSER: INFECTION AND RESISTANCE

Infection and Resistance. An Exposition of the Biological Phenomena Underlying the Occurrence of Infection and the Recovery of the Animal Body from Infectious Disease. By Hans Zinsser, M. D. With a Chapter on Colloids and Colloidal Reactions by Professor Stewart W. Young. Second Edition Revised. New York: The MacMillan Company. 1918. Price \$4.25.

The Reviewer, who has taught this subject in one of the large medical colleges in the west and also has given postgraduate instruction on it, and who is familiar with practically all textbooks that have within the past decade been submitted to the profession, on infection and immunity, unhesitatingly pronounces this to be by far the most practical, thorough and, above all, understandable volume he has read. The book, as stated in the preface, was intended primarily for the undergraduate medical student, but, its great value to the practicing physician lies in the arrangement and method of presentation of material. As the author says, it is not an A B C of immunity. He has not attempted too extensively to simplify material that in its close analysis presents complex phenomena and intricate reasoning. This volume is really a history of our knowledge of infection and immunity in that it details the progressive steps and facts as they were acquired, citing the experiments in considerable detail, also the deductions drawn by the experimenter and their adding a criticism by the author of the volume.

Beginning with infection and the problems of virulence, we have in the first chapter a very comprehensive review of what infectious disease really is and what the essentials are for the development of an infectious disease. Then follows a chapter on bacterial poisons. It is in this chapter that we first encounter mention of the recently developed theory that lipoids and colloids and their combination with the protein molecule have a great bearing upon

the problem of infection and resistance. The exhaustion theory of Pasteur, the retention theory of Nencki, the alkalinity theory of von Behring, the osmotic theory of Baumgarten, are discussed in detail, the experiments and conclusions derived therefrom upon which these theories were based, as well as the experiments formed to disprove them being given in sufficient detail to make them readily understandable. The work of Metchnikoff, the phagocytic theory, that of Ehrlich, the side-chain theory, are explained in a very lucid manner; the successive steps by which these theories were evolved, the objections to them that were raised at various times, and how the exponents of these theories met such objections, all are presented in a highly readable and interesting manner.

Finally, the work of Bordet and his school, as well as the work of Abderhalden, is explained in minute detail. The entire matter with its various practical, clinical manifestations, as, the question of serum sickness, of anaphylaxis, of protein sensitization, is ably discussed from a practical as well as theoretical standpoint. The precipitin reactions and their medicolegal aspect are carefully discussed and a perusal of this chapter will serve to enable physicians to understandingly discuss these matters which are so frequently encountered by them and of which they usually have but a vague and, often, erroneous idea. Even the busy clinician will find in the chapters on therapeutic immunization in man the answer to the thousand and one questions that cross his mind whenever he administers a biologic product either for prophylactic or for curative use.

The chapter on colloids is a very satisfactory presentation of the more important generalizations at present held in this branch of physical chemistry. Colloidal chemistry is today in a very unsettled state. There are many known facts but there is seemingly at present no definite correlation of these facts into an orderly and scientific whole that can be presented to the average physician. Still, the ex-

periments detailed are sufficient with the fundamental generalizations presented to enable the physician to understand the present theories concerning colloids.

Summary: Aside from the readable and interest-sustaining style in which this volume is written, it presents, without bias, an historical review of the subject in such a way as to lead us to clearly understand, so far as is possible, the present theories of immunity. The criticism in all places is constructive and we are gradually led through the experience of all the previous work upon this subject in such a manner that the finally constructed edifice is perfectly understood because of the fact that we are familiar with each stone of which it is constructed. This prevents our going astray and drawing our own erroneous, personal theories, because, if we read this volume, we will find that all of these theories, such as occur to the average man, have previously occurred to other men well versed in the subject, and have then been either proved or disproved by actual experimental investigation.

J. F. B.

"ANNALS OF MEDICAL HISTORY"

Annals of Medical History. Published quarterly. Editor, Francis R. Packard, M. D. New York: Paul B. Hoeber. Volume 1. 1917. \$6.00 per annum.

A few weeks ago, No. 4 of the first volume of *Annals of Medical History* made its appearance, somewhat belated, yet, eagerly looked forward to and certainly welcome. It contains, among other interesting communications, an article by Sir William Osler, on the first printed documents relating to modern surgical anesthesia. William O. Owen writes concerning the legislative and administrative history of the medical department of the United States Army during the Revolutionary period of 1776-1786. Dorothea Waley Singer and Reuben Levy describe some plague tracts.

An editorial article is devoted to Franciscus Dela Boë Sylvius, a prominent physician of the late middle ages, whose character and career have a unique and absorbing interest. The Reviewer has in mind more particularly the "Tractatus de Phthisi", which forms tract No. 4 of the collected works, and in which that acute observer, as one of the earliest, brings

tubercles ("tubercula") into causal relationship with pulmonary phthisis. The origin of these tubercles Sylvius assumes to lie in tiny glands, through the suppuration of which ulceration of the lung-tissue and consumption follow. Of course, Sylvius was enabled to make this observation because of having had the advantage of careful anatomical dissection, which before him had been connected with almost insurmountable difficulties. His doctrine was decidedly novel; nevertheless, he was willing and able to defend it against sneering calumniators. However, we are writing a review of *Annals of Medical History*, and not of Sylvius' "Tractatus de Phthisi."

It required a not inconsiderable degree of courage and enthusiasm on the part of the publisher to undertake this remarkably fine publication, and at a time when it was to be apprehended that but few physicians would be willing to dig up the six dollars for such a volume. We are informed that Mr. Hoeber intends to continue the publication of these Annals, and we sincerely hope that the support and encouragement accorded him may be sufficient to justify this enterprise.

As a pleasing occupation for the physician's leisure hour, as an interesting study by the wayside, and even by way of historical introduction to many present-day problems, the scholarly and erudite contributions to this first volume stand pre-eminent. We feel like congratulating the English-speaking medical profession on the fact that we have in Mr. Hoeber a publisher who is passionately devoted to beautiful books and to those also who are not solely and strictly utilitarian in nature.

"QUARTERLY MEDICAL CLINICS"

Quarterly Medical Clinics. A Series of Consecutive Clinical Demonstrations and Lectures. By Frank Smithies, M. D., at Augustana Hospital, Chicago. Volume 1. Number 1. St. Louis: Medicine & Surgery Publishing Company, Inc. 1919. Price, \$5 per annum: \$1.50 per copy.

With the initial number, that for January, 1919, *Quarterly Medical Clinics*, a new periodical, makes its bow to the medical profession and advances its claim to being of actual and practical usefulness to medical men in general. The first number, now before us, contains the record of 15 cases, presented and discussed by Dr.

Frank Smithies, at Augustana Hospital, to the senior students of the School of Medicine of the University of Illinois. What appeals to the Reviewer particularly is, the thorough manner in which the case-histories, as well as diagnosis, discussion, treatment, and so forth, are presented; the diagnostic considerations being supplemented by detailed descriptions of the various laboratory-tests that are utilized in the effort to establish a correct diagnosis.

Although a number of similar periodicals already compete for the favor of American physicians, the Reviewer hopes that *Quarterly Medical Clinics* will meet with the cordial response and support that this publication richly merits. There is a great deal to be learned from these instructive case-histories and their masterly presentation. Physicians will find these pages entertaining reading and will inevitably be reminded of "cases" that had been not quite clear to them, but, upon which they are now getting light. The selection of the case-histories is a splendid one, they being of a nature with which physicians are constantly meeting in actual practice. We wish the new undertaking all good fortune.

"THE MEDICAL CLINICS OF NORTH AMERICA"

In the Philadelphia number of *The Medical Clinics of North America*, the problems of influenza are granted almost one-half of the available space. Dr. Alfred Stengel compares the influenza-epidemics of 1889 and 1918; Dr. H. R. M. Landis discusses influenza and some of its complications; Dr. John B. Deaver's contribution deals with surgical complications and sequels of influenza; and Dr. Randle C. Rosenberger presents a bacteriologic study of sputums; and so on through the list of the problems.

A topic of interest was discussed in a clinic of Doctor Rehfuss in connection with a consideration of the medical treatment of biliary affections that so often puzzle the general practitioner. Also, there is reported a clinic, by Doctor Ostheimer, on the ever present and inexhaustible topic of feeding babies during their second year, and a clinic, by Doctor Jonas, on diabetes. The present number contains almost 260 pages of text.

The Medical Clinics of North America is a bimonthly, published by The W. B. Saunders Company, at a subscription-price

of \$10.00 per year. Each number is devoted to the clinics of some particular city.

"INTERNATIONAL CLINICS"

The last volume (No. 4) of the 1918 series of the "International Clinics" issued has a personal interest, because it contains an article on vaccines and sera in influenzal pneumonia, that is contributed by Dr. J. F. Biehn, who, by no means, is a stranger to readers of *CLINICAL MEDICINE*. Other articles dealing with the influenza-problem are, one by Doctor Sonnenschein, on ear, nose, and throat involvement in the recent influenza-epidemic; another one, by Doctor Babcock, on the medical aspects of influenza-pneumonia. Also, attention must be called to a brief note on local anesthesia in the reduction of fractures and dislocations, in which Dr. Charles Green Cumston describes a method by which, under the use of procaine, the pain of fracture or dislocation can be completely controlled, while muscular contraction is overcome, so that reduction and the application of dressings may be easily accomplished.

There are numerous other important articles in this volume of "International Clinics," which is a quarterly published by The J. B. Lippincott Company, of Philadelphia, at the price of \$2.00 per volume.

WILSON: "HEARTS OF MAN"

The Hearts of Man. By R. M. Wilson, M. B. London: Oxford University Press, 1918. Price \$2.00

The primary object of Mr. Wilson's book, the author declares, is, to encourage investigation into certain phenomena of the circulation of the nervous system that have hitherto not been investigated from the purely clinical standpoint. For example, the relationship of the pulse to the respiration, the mechanism of breathing in effort and at rest, the meaning and effect upon the general circulation of the great "blood lakes" of the skin, abdomen, and lungs. Accordingly, the author discusses subjects like reaction breathing, the function of the abdominal wall and breathing, the emptying of the abdominal blood cistern, rest breathing, and also investigates the relation of the ductless glands to the reaction state as well as many other problems that are of importance with regard to the circulation.

Condensed Queries Answered

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report their results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

Answers to Queries

ANSWER TO QUERY 6414.—“Sudden Death During Convalescence from Influenza.” Dr. Chas. Keller, of San Mateo, California, in referring to Query 6414 (this journal, February, p. 167), relates a similar experience with a young woman who had pneumonia. She was recovering from the pneumonia, when, one evening, she turned upon her side to cough, then, turning back on her back again, she died within ten minutes, her heart continuing to beat normally until death ensued.

When the undertaker opened her femoral vein, he drew out of it an organized embolus, which had the shape of a vein and several ramifications.

The Doctor adds: “Could there have been a similar embolus in her pulmonary veins that caused the death?” We have no doubt that this possibility existed. Indeed, it is more than a possibility. In all probability this is the explanation of the young woman’s sudden death, as described in Query 6414, in the February issue.

Queries

QUERY 6420.—“Myalgia”? J. M. I., Illinois, desires assistance in the following case:

“The patient is an unmarried school teacher 30 years of age. She complains of tenderness in the left side of her chest. It has a feeling of fulness and causes pain in her left arm. The heart-sounds are normal, but, percussion of any part of the left chest causes pain over the part percussed and brings back the pain in the left arm. She has had this condition for several years; it is more pronounced when the patient is constipated. What is your suggestion?”

The problem that you set us to solve regarding this woman teacher, is not easy of solution without our having further information.

You tell us that the heart-sounds are normal and, also, that percussion of the left chest causes pain; however, you do not say what is the result of the percus-

sion or what are the respiratory sounds observed at auscultation. This, of course, would have to be known.

Assuming that, on auscultating the chest, you did not discover any abnormal sounds, we might conclude that the tenderness complained of by your patient indicates myalgia involving the great and small pectoral muscles, this being transmitted to the arm; which, of course, would not be strange at all.

In such a contingency, we should expect the urine analysis to disclose certain symptoms of faulty metabolism, possibly increased acidity, insufficient elimination of urea, and presence of small or moderate amounts of skatol and indican. This, of course, would have to be determined, and this knowledge might aid in the treatment to be decided upon.

On general principles, doctor, we suggest subjecting this patient to a general cleaning out, and to make certain that the

function of the digestive tract proceeds satisfactorily, both as to digestion and as to assimilation,

If there is intestinal fermentation, that should be controlled by means of the sulphocarbolates or by giving Bulgarian-bacillus cultures.

The action of the intestines may need stimulation or coaxing. Strychnine, hydрастинine hydrochloride, and similar drugs often accomplish much in that direction. Some digestants may be of service. In that event, papain, in various combinations will prove useful.

It may be that this patient is simply "nervous" and that the condition will yield sooner or later to the administration of certain nervines, possible monobromated camphor, quinine valerate or the combined trivalerates with sumbul.

It is difficult to outline a definite treatment for this patient, unless we know much more concerning her than we do.

QUERY 6421. — "Green Vomit and Stools." W. S. W., Georgia, asks:

"What treatment would you suggest for a baby with distended abdomen, vomiting green matter, and passing green stools; with or without fever? What is this green matter? Is it bile? Most of them die. They seldom have diarrhea."

It is rather difficult to prescribe a general treatment for babies affected as you describe, doctor. It is unusual for the symptoms named to be present together in a large number of cases; that is to say, this writer knows of no definite disorder presenting this syndrome. Of course, if volvulus or obstruction of the intestine from any cause obtains, the stools would not be voided, although the vomitus might be stercoreaceous and green in color.

As you are aware, in acute intestinal indigestion, tympanites rarely is very marked, and the first stools are more or less fecal, that is, of yellow color; they then become yellowish-green and finally often grass-green, this color resulting from the presence of biliverdin.

In a certain proportion of cases, the intestinal symptoms alone are observed, but, in others, the disturbance of the stomach is slight and that of the intestine serious; while, in the third class, the reverse condition may be observed.

In the more severe forms, the skin is hot and dry, the temperature rises rapidly, and

vomiting may be an early and important symptom; mucus and serum, which sometimes is almost pure bile, may be ejected. Not at all infrequently, diarrhea does not occur for twenty-four hours after the beginning of the grave constitutional symptoms. The stools may be either gray, green or greenish-yellow, and almost invariably large amounts of gas are discharged. After the bowels have thoroughly emptied themselves, there usually occurs a drop in the temperature and the prostration, although often great at the beginning, may not be of long duration.

It is, of course, essential in all such cases to avoid giving milk in any form. Give small doses of calomel, followed by castor-oil; then albumen-water and barley-water, in small quantities, at frequent intervals.

The bowel should be washed out with warm physiologic salt solution. Later, a little milk and lime-water may be administered.

This writer gives all these children minute doses of calomel and podophyllin, and pushes the sulphocarbolates in solution.

In all cases, heat may, with advantage, be applied to the abdomen, also, the wearing of a flannel belt proves beneficial.

It is probable that the number of deaths you have had are attributable to the parents giving the child food contrary to your instructions.

QUERY 6422.—"Keratosis Pilaris." G. M. J., Texas, describes his own condition and asks for help. He writes:

"For about six years, I have been suffering with what, to me seems, a very peculiar skin trouble. I shall not try to give you all the symptoms, because I do not know how. My health was very poor for a long time; it did not seem that I could live longer than a few months; but, during the past year, my general health has been much better, except that the skin trouble persists. I really think the trouble is in the blood. At first, I tried all the local remedies that I knew of. I tried remedies to cleanse the blood, but, without avail. I tried other physicians, however, they seemed to know and to accomplish no more than I did. Meantime, I almost went wild with suffering. It was all over my body. At present, I suffer but little, except for my feet and legs.

"The suffering is caused by a small white or pearl-colored something, for

which I have no name. These little things are of all sizes, from as small as you can see, up to about half the size of a pin-head. They have a smooth polished surface and seem about as hard as raw rice. The pain is something like thousands of very fine needles pricking, or it burns like fire, or it may be a stinging-itching pain, according to the parts affected. But for an accidental discovery as to how to rub these things out of the skin, I believe they would have killed me long ago.

"I believe I should be safe in saying that I have rubbed ten thousand of these things out of my skin in twenty-four-hours' time. When I go too long without rubbing, my ankles feel as if they were dislocated or sprained; so, also, my great toes. Besides, it produces a state of exhaustion, which makes me 'yawn my head off,' and also a severe (perhaps a nervous) cough. After rubbing most of these things out, the worst symptoms subside and I rest very well.

"Now, is this some unusual disease? Or is it something well known and understood by the better-informed physicians? If you know anything about this trouble and can tell me what to do, I shall be more grateful than I shall be able to express. I can go to no great specialist, because I have been able to do but little during the past ten years and nothing at all during the past six years; so, I am dead broke. If it is not asking too much, I should like to hear from you on this subject."

Without a clearer clinical picture, it is rather difficult for us to venture an opinion as to the character of the dermatosis from which you suffer; however, it possibly is keratosis pilaris, also known as lichen pilaris and pityriasis pilaris.

In this disease, conical, slightly pointed papules, the size of a pinhead, and of a whitish, grayish or dark-gray color, are situated at the outlets of the hair-follicles. They are discrete, numerous, but, do not form patches, and are more or less evenly distributed over the affected regions. They usually are found on the extensor and outer surfaces of the thighs and arms and, in rare instances, showing a more or less general distribution. Each papule is pierced by a hair, lanugo-like in character or broken off at the apex of the papule, where it can be seen as a dark point. They are hard and the apex is slightly scaly, and, to the hand passed over the part, feel

like the surface of a nutmeg-grater. If the accumulation drops out or is rubbed or picked out, a small depression marks the opening of the hair-follicle.

However, in keratosis, subjective symptoms as a rule are absent, although moderate or even considerable itching is complained of occasionally.

Stelwagon states that, anatomically, the malady consists in a hyperkeratinization (or cornification) of the upper part of the pilosebaceous follicular outlet, and that the papular elevation results from the formation of the superabundant accumulated epidermic horny mass, which projects beyond the orifice.

There is some resemblance between this affection and pityriasis rubra pilaris, and, when congestive and inflammatory elements are present, a distinctive diagnosis is somewhat difficult. For instance, Brocq divides the cases into several forms—keratosis pilaris alba, keratosis pilaris rubra, and two intermediate divisions.

The common clinical type, as a rule, yields readily to treatment, but, in some rare instances, especially the inflammatory type, the cure is not so readily effected. In ill-nourished individuals, arsenic, iron, and codliver-oil are advisable—as, for instance, the combined arsenates with nuclein, two tablets taken three times daily, and one dessertspoonful of codliver-oil, morning, noon, and night.

As a rule, however, only external medication alone is necessary. The affected area should be bathed frequently with hot water, either with green soap or carbén-zol. Occasionally, alkaline baths prove more efficacious, 1 ounce of sodium bicarbonate on the borate being added to 5 gallons of water. Subsequently, a mild salicylated ointment (10 grains to the ounce), with equal parts of petrolatum and lanolin as a base, should be applied.

A still rarer disease is keratosis follicularis. This usually appears first upon the head and the face. An excellent description of it appears in Stelwagon's "Diseases of the Skin."

We suggest that you submit to a competent pathologist some of the concretions that are "rubbed out" of the papules; also, at the same time, if possible, a good photograph of the affected areas.

QUERY 6423.—"Psoriasis." C. B. M., Illinois, writes: "I have a case of psoria-

sis under treatment, which defies all book treatments I can find. I now have the patient on emetine hydrochloride, $\frac{1}{2}$ -grain doses, hypodermically, twice a week, but he shows no improvement. His trouble dates back some six years, and he has been treated by numerous doctors. The Wassermann reaction is negative; there is no history of venereal diseases of any kind. Can you suggest anything that might help me out in this case?

The fact that the index to Sajous' Analytic Cyclopedias mentions sixty-seven remedies for the treatment of psoriasis is highly suggestive and may afford you a small degree of consolation in that your own case has defied all book treatments that you could find. Many other physicians have had the same experience.

The point that impresses the writer on looking up the literature of this disease is, that its etiology is by no means clear, neither bacteria, fungi, nor other definite microorganisms having been definitely associated with its occurrence; nor have the neuropathic theory and the autointoxication theory been substantiated sufficiently to form a satisfactory working basis. In all probability, we must conclude that all etiological factors that have been advanced as concerned may be active in one or the other of the cases confronting us and requiring treatment.

It seems to be most reasonable, however, to assume that psoriasis is a systemic disease due to an autointoxication of dietetic origin, the proteins in the food producing poisons in the form of insufficiently disintegrated intermediary products of metabolism. For this reason, Sajous advocates a strict vegetarian diet, thus eliminating all meat proteins. This procedure also has the support of Dr. L. Duncan Bulkley, who, as you know, is a dermatologist of wide clinical experience.

In addition to the dietary restrictions, it will be well in a given case to take an inventory, as it were, of the patient's assets and liabilities, more particularly to ascertain the efficiency, or otherwise, of the metabolism by one or several complete analyses of the urine, the twenty-four-hour quantity of which should be known in every instance. The presence of indican, skatol, oxalic acid, and other evidences of autotoxemia would indicate definite treat-

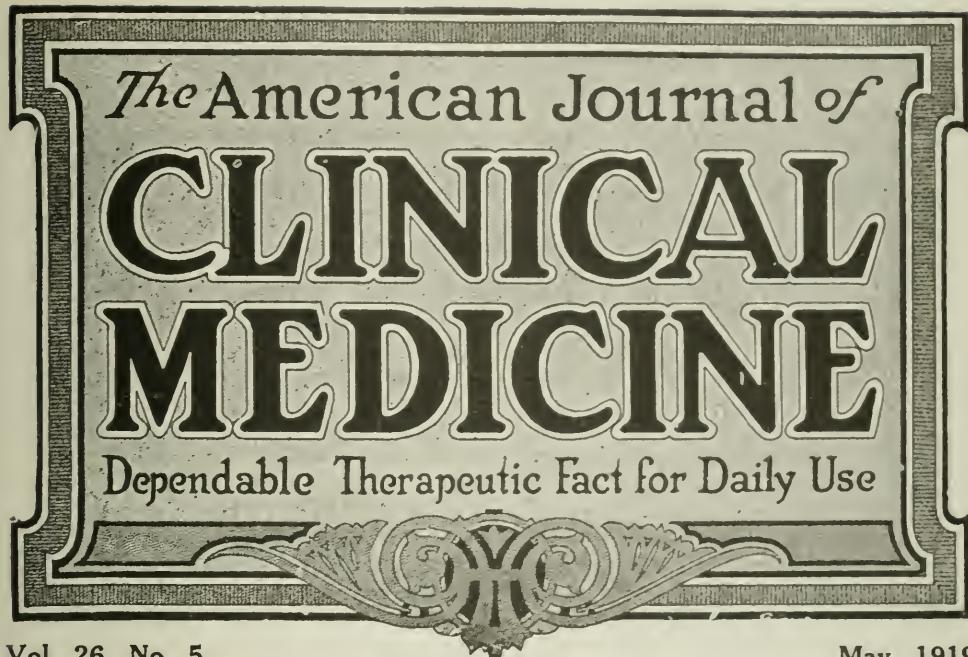
ment leading to the correction of an existing perverted metabolism.

In any case, it will be well to institute a complete elimination of autotoxic substance by ordering a course of calomel, podophyllin and bilein, a tablet containing 1-6 grain of each being taken in six doses and followed by a full dose of saline laxative. After this, intestinal antiseptics containing the sulphocarbolates of calcium and sodium should be ordered in large doses, from thirty to sixty grains per diem; or the clean-out may be supported with calcium sulphide, the 1-6 grain granules being preferable to every other form, three of these being ordered every hour for a day or two and then less often, while at the same time small doses of saline laxative are ordered, sufficient to secure a gentle laxative effect.

We believe that, in an obscure condition like psoriasis, the production of a decided nonspecific-protein reaction may be of benefit. Concerning this, various contributions have appeared in the literature of the last few years. Dr. E. V. N. Van Alstyne, of New York City, for instance, has an article on the nonspecific-protein treatment of psoriasis in the *Medical Record* for September 29, 1917, p. 538.

Finally, we are reminded of the experience of two physicians, one a friend in general practice in Texas, the other known to us through correspondence, a member of the medical faculty of the University of Prague, in Bohemia. Both these men observed definite and permanent healing of psoriasis after the injection of suitable tuberculin preparations. The only tuberculin preparation available in this country which we would care to recommend is, Dr. Karl von Ruck's antituberculosis vaccine. The initial dose of this vaccine had best be placed at 1-20 mil (Cc.) and you must expect a decided reaction which is apt to put the patient to bed for a day or two. After this, though, there may be looked for a noticeable improvement in the condition, and, indeed, we are satisfied that this treatment would be well worth while.

Even if this is employed, however, it will be necessary to attend to your patient's general nutrition, assimilation, metabolism and elimination so that the suggestions given in the foregoing are by no means supererogatory.



Vol. 26, No. 5

May, 1919

As To The Causes Underlying Epidemic Diseases

AS shown by his two articles on the epidemiology of influenza, (this journal, Dec. '18, and April '19) Doctor Croft is convinced that he has raised very strong points against the bacterial origin of this disease, holding that bacteria as a cause are but a secondary factor, as, indeed, they are in all bacterial affections, and that, fundamentally, the disease must depend upon some other primary factor or factors; that bacteria, as such, can do no harm, unless the conditions of the body warrant their multiplication. Doctor Croft then asks: "What are the conditions that occur at certain intervals and which render these organisms virulent? What are the conditions that favor these germs and enable them to incite an epidemic?" He asserts that more thought and study should be devoted to those influences that render our normal living-environment favorable for the growth and development of pathogenic bacteria. That we must discover the causes in this epidemic that have enabled these

germs to secure such a firm grasp upon our system.

During the seventies and eighties of the last century, that is to say, in the early days of bacteriology, the discovery, that certain bacteria stand in manifest causal relation to certain infectious diseases, led to sweeping and extreme conclusions; it being assumed, especially by bacteriologists, that the cause of a disease is determined by finding the related microorganism. This extreme view never was accepted unconditionally by practitioners, and, as early as the late eighties and nineties of the last century, it was considered that something more than the presence and invasion of a pathogenic microorganism is required.

Then the idea of a peculiar predisposition was advanced, differing somewhat from that in which the term had previously been accepted. This, however, was not very satisfactory and, as great a clinician as Germain Sée declared that predisposition was merely a convenient term with

which to hide our ignorance. In further investigations, the actual importance of the "constitution" of the individual again came to the foreground, after having been discarded as nonrelevant, several decades earlier, and it was especially Martius, of Rostock, among others, whose investigations into the constitutional anomalies created more sensible views with regard to the causation of disease. It was again recognized that the constitutional peculiarities are a factor in bacterial maladies.

It has long been realized that the mere presence of pathogenic organisms upon the mucous membranes or in the tissues is not sufficient to produce infectious disease. There must be a receptivity on the part of the individual, a vulnerability of the tissues, a "weakened constitution" or a "specific predisposition", whatever one may wish to call it. This, however, would be purely individual, and it remains to be determined how it is that, at certain times, infectious diseases of bacterial nature (undoubtedly so, even though a specific virus may not be discoverable) can become epidemic and pandemic.

In this respect, we must search out factors that affect equally the populations of large regions, of entire countries, and even continents. Such general influences, naturally, must be looked for, first of all, in atmospheric and meteorological conditions, and which, indubitably, are of very great importance. Yet, whether such far-reaching and decisive importance can be attributed to them as Doctor Croft believes, seems rather doubtful.

Another factor that assuredly stands in relation to the problem is the one mentioned by Doctor Lydston in his discussion of Doctor Croft's first paper, and this is, the crowd-factor. On all occasions when great numbers of people are crowded together for unaccustomed occasions, epidemics have been known to occur. This fact has been experienced during the present war, when many thousands of recruits and soldiers were housed in camps hastily constructed, and in which the demands of sanitation were not always satisfactorily complied with. It has also been observed as one of the consequences of war when the latter was associated with deprivation, exertion and other misfortunes incidental to war. Further, it has been experienced as a consequence of poverty, deficient nutrition, and, indeed, such other conditions as often

affect certain portions of the population because of war.

Yet, wars are not the only occasion that may give rise to the crowd-factor as an active agent in the originating of epidemic diseases. Thus, it has been found that annual religious festivals in India regularly have demanded numerous lives sacrificed to cholera and to other filth-diseases. The annual pilgrimages to Mekka frequently are attended by numerous fatalities through infectious diseases; which, though, do not usually become epidemic, because of the limited extent, here, of the crowd-factor.

At the present day, more than ever, the enormous pathogenic importance of fear, of nervous stress, worry, excitement is recognized as instrumental in lowering the organic resistance to unfavorable influences. Christian Scientists not unjustly designate fear as a fruitful source of disease; fear being understood in its widest conception possible.

If we consider how the World War brought about a complete upheaval of our habits and how it interfered, not only with our physical and mental comfort, but, also profoundly influenced our sympathies, our personal apprehensions for the welfare and safety of friends and relatives; how, further, it affected our resources by depreciating the purchasing power of money, thus lowering, in a way, the standard of living, it can readily be understood that whole nations were in a constant state of nervous tension, excitement, apprehension, and even fear that could not but reflect unfavorably upon their vitality, their physical and mental resistance.

Undoubtedly, certain vitiated conditions of the atmosphere may, in part, be instrumental in creating a favorable nidus for infectious bacteria, by irritating the upper respiratory passages. By crowding, normal living-conditions are made impossible, and, lastly, by severe nervous strain and stress, anxiety, unhappiness, which afflict entire nations during periods of war, primary conditions may be created that produce a culture-soil favorable for the production and proliferation of infectious bacteria, which thereupon, because of that factor, may acquire pathogenic properties and thus give rise to widespread disease.

It is to be kept in mind that the "facultative" noxious parasites may reside upon mucous membranes as saprophytes, without being able to determine disease. The

reason for this is, that, in the individual, the systemic defenses are of a nature to more than balance the inimical tendencies of the bacteria and thus to prevent their disease-producing activity. Sometimes, though, this balance is a very delicate one when it does not take much to depress the organic resistance, in which case the bacteria rapidly develop their harmful peculiarities, with the consequence of producing disease.

If the causes that thus depress the systemic resistance are widespread, affecting similarly the majority of inhabitants of a city, a county or a country, the conditions for an endemic or epidemic development of infectious disease are given, and this may become pandemic if the several factors active in the first production of the disease are spread over the inhabited globe.

Every man has to have a little corner of his soul which he can possess alone; he has an hourly reckoning which he alone can make to his Creator; he has an inward light or voice which guides him, which he alone can see and hear.

MISSOURI PHYSICIANS WATCH OUT!

We are informed that there is pending, in the Missouri state legislature, a bill, known as House Bill 909, which requires physicians dispensing their own medicines to place upon the receptacle a label or card stating, in the English language, the name of each drug contained therein and the exact amount of each ingredient.

This is, of course, another of the numerous efforts being made by certain people to interfere with the doctor's right to dispense his own medicines. Attacks of this kind are becoming less direct, but, more insidious.

We strongly advise every Missouri physician to communicate, without delay, with his representatives in the legislature, telling them, in language that they can not misunderstand, exactly how they feel about bills of this character.

THE VICTORY LIBERTY LOAN DRIVE AND THE W. S. S.

During the last days of April and until the tenth day of May, the Fifth Loan campaign will be inaugurated by the Treasury Department of the United States government for the purpose of raising the funds

needed to pay the bills incidental to our entry into the war. This campaign is to be called the Victory Liberty Loan Drive in commemoration of the happy ending of the war.

We might write pages concerning the necessity of supporting the government in this matter. The plain and perfectly convincing argument is, that the money is needed. The bills are there and have to be paid. If the money is not placed at the disposal of the government by way of loan, it will have to be raised by taxation, and, there you are. So, it's a very simple proposition and, as honest debtors who want to pay their bills, we simply have to come across.

It seems unnecessary to make much ado about it; the object is a just one. We went into the war whole-heartedly with a single eye to the object to be gained, that is, to administer a merited rebuff to the arrogant autocratic powers that had attempted the subjugation of the democratic European nations, and to defeat their object. It sounds beautiful to say that the United States entered the war without any selfish or personal motives whatever but simply to make the world safe for democracy. Nevertheless, it is perfectly manifest and self-evident that our own peaceful pursuits were in more or less actual and serious danger if so be that the aspirations of the central powers were successful. Hence, in a way, we entered the war to insure our own safety, our own industry and commerce. And, this is by no means an objectionable cause for war. In one sense, even, we fought to secure and assure our own existence.

All this being so, it follows as a matter of course that we should, and must, be willing to pay the bills. When this issue of CLINICAL MEDICINE reaches you, the loan campaign will be in full swing. Be sure to invest all the money you can in it, not only for the purpose of aiding the government to meet its obligations, but, incidentally, in order to take advantage of an opportunity for making a remarkably safe and profitable investment. Let the Victory Liberty Loan be the most successful ever inaugurated by the government.

Incidentally, let us keep in mind that the thrift stamps and War Savings Stamps continue to be sold and that investment in these bits of paper is a very easy way to

save small sums of money without a serious sacrifice. For the children, these baby bonds, as they might be called, constitute a lesson in thrift and saving the value of which can not be overestimated. It should be the pride of every child in this big country of ours to buy thrift stamps, going without sweets occasionally, if necessary, and to convert them into War Savings Stamps as often as this can be done. For grownups, also, one or several cards filled gradually with those War Savings Stamps is a very satisfying possession and one the increasing growth and value of which can not but make for greater contentment and security.

A man wants a human being beside him, who is there when he wants someone, but who will let him alone when he wants to be alone.

THE SALVATION ARMY WANTS MONEY

Eh, what's that? The Salvation Army wants money? So be it. Let's dig down and hand it over.

Time was, not so long ago, when those little gatherings down-town, at the street-corners, in the market-places, where a few Salvation Army people would draw a little crowd, singing and exhorting and praying, elicited but a supercilious, cynical smile from our superior, stronger-minded selves.



The Salvation Army, then, was looked upon as an aggregation of religious cranks, innocent and harmless enough, but, whose literal acceptance of the Bible, literal in the sense of orthodox interpretation, was almost childishly impracticable and impossible.

Yet, hold on, brother, that same unpractical and impracticable Christianity induced the Salvation Army to go into the tenement districts, the tenderloins, the worst places in the cities to get a hold of the submerged, the down-and-out, the hopeless, the flotsam and jetsam of the populace, to save and reclaim those that could be salvaged, to soothe and comfort the last days of those that no longer could be saved to life. It was the most practical and actual kind of

Christianity that the soldiers of the Salvation Army preached, by living it, by doing more than by talking.

And, so, it came about that people who had sneered at the blue-clad men in their semimilitary uniforms and the lassies with their quaint poke-bonnets changed their sneer to a half-tolerant half-sympathetic and admiring smile, and never failed to drop a quarter or a half dollar or even a greenback when the ever present tambourine was held out to them. There was something real, something appealing in its honest truthfulness that got under your skin, and you just couldn't refrain from helping a little here and there.

Then came the war; and, with the war, the problems of the Salvation Army were multiplied manifold. The Red Cross, the Y. M. C. A., the Y. W. C. A., and the other welfare-organizations had no difficulty in receiving ample means and resources for their beneficent work. The Salvation Army went in without blare of trumpet, without saying much about its intentions, just going ahead and acting upon the idea that, to the boys in the trenches, to those who come back from valiant but exhausting fighting, to those who worked and fought and labored, the home creature-comforts would be most acceptable.

Has there ever been a soldier-boy to whom a cup of hot coffee with a couple of "sinkers" did not appeal? It was, truly, an inspiration of genius that moved those wonderful Salvation Army lassies—we don't know their names, but, their memory will live—to establish themselves in little huts as near to the trenches as they could and have ready for the men coffee and doughnuts whenever these might be called for.

While "coffee and doughnuts" has become almost a slogan by which the war-work of the Salvation Army is identified, the activities of this astonishing organization have been truly magnificent and all-embracing. The accomplishments of its members in the theater of war have been recorded many times and the soldiers returning home never fail to express their admiration and their deep and lasting affection for the soldiers of the Salvation Army.

With all this immense work, though, the various activities of the Salvation Army at home could not be interrupted and, indeed, had to be continued and car-

ried on even more intensely than ever before, since so many families were left without father, husband or brother, whose earnings formerly had helped to keep the wolf from the door.

So, the Salvation Army again stepped in, or, rather, remained right there, and accomplished its task unassumingly, cheerfully, encouragingly, helping where help was needed, stimulating, supporting, always trying to live, and thus to teach and emphasize, the lessons of Him whose servants and followers they are.

There are many other activities in which the Salvation Army has been foremost, many in which it has done pioneer service. And, now, through the demobilization of the soldiers, the duties—self-imposed, if you will—of the Salvation Army at home have become even greater. Its aim is, to continue to be, as it always has been, an organization of poor people for poor people. Moreover, Commander Evangeline Booth has decided that the constant collections in the street shall cease, so that the officers may devote their entire time to constructive work.

All this calls for money, much money, and yet more money. It is because of this that the appeal is being made to the American public for a fund amounting to thirteen million dollars, which shall enable the Salvation Army to continue its work. The campaign for raising this sum will be conducted, all over the United States, during the week of May 19-26.

Thirteen million dollars is a big sum. It is real money. Yet, it seems small when we consider what the Salvation Army has done, what it is doing, and what it has set itself to do. On the letterheads of the Salvation Army, there is printed the legend in red ink, "A man may be down, but, he never is out". If it were only for that and everything that it stands for, the Salvation Army would deserve every support that we can give it.

So, let us physicians do our share, not only by going into our pockets, but, by speaking to our friends in behalf of the Salvation Army, by encouraging and requesting others to help and give. Surely, the aim and purpose are worthy, the work is one for which the Salvation Army is peculiarly fitted because of its great understanding and love for the unfortunate. Let it not be hampered by lack of funds. Let it be supported in every way possible

for this important and essential work that is being done.

Usually when a man demands an explanation" he is looking for a bone of contention, and means to find one, meat or no meat upon it.

THE AMERICAN MEDICAL EDITORS' ASSOCIATION

The next annual meeting of the American Medical Editors' Association will be held at Atlantic City, Marlborough Blenheim Hotel, on June 9 and 10; that is to say, on the first two days of the meeting of the American Medical Association.

As this will be the fiftieth annual meeting of the Association, a special effort is being made to secure a full attendance of the membership and to arrange a program fitting the auspicious occasion.

Now, doctor, of course, you are going to attend the meeting of the American Medical Association. Even if you are not a medical editor and not privileged to belong to the august association of the medical editors, you are cordially invited to attend the meetings, and you will enjoy them, for, we assure you there will be a lot of brainy fellows to be met and many interesting communications will be read.

CRYING NEED OF THE TRANSITIONIST

In this age of specialism, why have we no transitionists — practitioners peculiarly qualified to treat conditions presented in that great middle field where the pediatrician fears to tread and the geriatrician is uncalled-for?

That the young human, after having been safely convoyed through the dangerous waters of infancy, begins, at about the seventh year, to leave the neuter class and to assume either male or female characteristics, is understood; still, the real importance of this first great transitional period is not generally recognized. True, now and then, some physician circumcises a "nervous" (usually a male) child or removes from school and prescribes iron for the underweight, the anemic youngster that cries more readily than he laughs and prefers playing "house" alone to wild romps with other children.

To bring the matter definitely home, ask yourself what you know about the normal changes (to say nothing about the systemic

disorders) occurring at that period of life. If your self-examination is rigidly honest, the verdict is more than likely to be, "Guilty of ignorance."

Advance seven years and consider the boy or girl of fourteen or thereabout. What do you know about or do for them, passing, as they are, through one of the most important transitional periods of their existence? Again, it is to be feared, an honest appraisement of your intellectual resources will reveal a condition approaching professional bankruptcy.

Of course, you can enunciate some platitudes concerning the "disorders of puberty" and even may have had acumen enough to suggest delicately to parents the desirability of having confidential talks with their offspring; but, what have you told them to look out for—what, as a matter of fact, are you prepared to do for those boys and girls presenting other than the most obvious symptoms of disequilibrium?

Can you even assure yourself that you are able to recognize the vague train of symptoms that so often ushers in paranoia; or, if you can do that, are you, even in the slightest degree, familiar with their true cause or able effectually to remove it? Are you not likely to make shift with such diagnoses as hysteria, neurasthenia, chlorosis, and such like, and institute lines of treatment as indefinite as your diagnoses are nebulous?

Let us be charitable to ourselves and pass over the next transition-period. Any general practitioner knows what to do for the young man or woman entering the married state, while the obstetrician will take care of the young mother later. After him, will come the gynecologist and the genitourinary man.

Time flies and "seven times seven years" have passed. The woman enters her "climacteric" and begins to demand attention. We are likely to consider that we know just how to proceed under these circumstances. But, do we? Do you? To administer sedatives and assure the unhappy woman that she is but traveling the road trodden by all daughters of Eve that live long enough to reach that age, should not satisfy you, and, most assuredly, it does not materially aid that patient.

Most of us, unfortunately, have accepted the dictum that the man does not experience a climacteric. Yet, the gonads and other glands, which for decades have

been active, gradually cease to function, and more or less pronounced physical and psychical changes accompany their involution. Loss of balance of the internal secretions means circulatory disequilibrium, nutritional disorders and cell degeneration—the very conditions that inevitably lead to sclerosis and the senile state.

That so many men of fifty or fifty-five "break down", is deplorable; that others, at this period, do most ridiculous or even disgraceful things, is equally regrettable; however, the most distressing fact of all is, that the medical profession, as a whole, is not capable of meeting these conditions.

Profound changes are occurring in the physical economy of such patients, and very serious consequences result from our inability to recognize and control them. Rest, change of occupation and of climate, sojourn in a sanatorium or a "reconstruction-camp" may prove beneficial in certain cases; still, they can not be regarded as definite remedial agencies.

To treat such patients intelligently, we must have a reasonably lucid idea of the basal pathology, and, to obtain this, more than a little study and research-work is necessary.

Truly, the need for the transitionist is great, and his field, when he arrives to till it, will be a fertile one.

I don't give a whoop for an innocent man or an innocent woman. They're good because they never had the chance to be bad. Gi'me the man or woman that has turned a dirty trick, and then's so disgusted with themselves that they're vaccinated for all times.

—A. P. Hawkins.

"THAT AUTOMOBILE TRIP"

According to program (we are writing on March 22nd, the day after commencement of spring), that automobile vacation trip is coming more largely into our vision. Last month, we talked about our intention to take such a vacation jaunt this season, and, also, we referred to our plan to have a symposium on automobile vacations to appear, possibly, in the June issue of CLINICAL MEDICINE.

As we are writing, the sun is shining brightly and the roads are beginning to lose their wintry unfriendliness. The air is bracing enough to make an automobile ride a keen enjoyment. That promises well for the future, and we just want to remind you that we expect you to come across with accounts of your experiences. Turn

back to pages 170 and 171 of CLINICAL MEDICINE for March, and read again what we asked for. Let us have your little write-ups, please, so that we can have ample time to get up a big automobile number.

Prejudices are like rats, and men's minds are like traps; prejudices get in easily, but it is doubtful if they ever get out.

"FACTS AND FALLACIES CONCERNING CANCER"

In his very interesting and instructive article on cancer, appearing among the original contributions of this issue, Dr. G. Betton Massey presents some very important information that it will be well to take to heart. Dividing, as Doctor Massey does, the life history of a cancerous growth into three periods, affords a means of roughly classifying cancerous growths with regard to their amenability to treatment. Naturally, the most favorable results may be expected from appropriate and persistent treatment during the first period.

However, during this first period, a cancer resembles in almost all respects a benign growth, being neither tender, painful, ulcerated nor hemorrhagic. Consequently, it will invariably be viewed as a benign growth, clinically, the more so as it is now recognized—as Doctor Massey points out forcibly—that under no circumstances must a suspected growth be incised for the purpose of securing a specimen for examination, on account of the danger of metastasis by extension through lymph channels.

How then is a malignant growth in its first period to be recognized? Doctor Massey asserts that, when first acquired, cancer is purely local and indeed, that it is not a constitutional disease. With this view, we are tempted to disagree, basing our conclusions mainly on the experiences and observations laid down by Dr. L. Duncan Bulkley in his two volumes on cancer and also in numerous journal articles, one of the most informative having appeared, a few weeks ago, in the *New York Medical Journal*. Doctor Bulkley maintains emphatically the contrary view, namely, that cancer is a constitutional disease, and that it is the expression of a "cancerous" diathesis which even before the localization of a definite growth (whether characteristic in appearance or not) presents cer-

tain peculiarities that are at least suspicious. If we have read Doctor Bulkley correctly, one of the principal characteristics of "carcinosis" is persistent acidosis.

In a discussion on cancer, at the April-9 meeting of the Chicago Medical Society, the statement was made that cancer never was "simple", and that as soon as there was carcinoma, there might be very large metastatic processes, though they were often overlooked. One speaker viewed cancer as a universal disease. He believed that everyone (N. B., in civilization) was carcinomatous, and the fact that so many escaped the disease was because of a certain power of resistance which prevented its development.

However this may be, it seems to us more probable that cancer itself must be accepted as a constitutional malady, its outbreak being associated with a more or less definite cancerous diathesis. The varying views on the subject merely show the difficulties standing in the way of a definite solution of the problem.

No matter, though, how the nature of cancer may be viewed, the conclusions with which Doctor Massey closes his brief paper should be kept in mind, more particularly, it should be remembered that there is urgent need of more general education regarding those facts that we do know, and with respect to those precautions which have been proved possible and useful.

ARE WE GOING "BUG"-HOUSE?

The discussions occasioned by the pandemic of influenza that set in last June and has since then manifested several exacerbations are typical of a certain tendency on the part of workers in medical scientific fields the world over. Given a disease or a symptom-complex that presents characteristics associated by us with the consequences of the invasion of a definite pathogenic virus, and there is at once set in motion a complicated machinery intended to discover the "germ"—be it bacterium or protozoon—that may be incriminated as the causative agent, and it is upon the discovery of such a definite virus, more or less putative, that the treatment of the clinical conditions supposedly owing to its action is based.

Take this present influenza-epidemic. The disease was given its name because

of the occurrence of a certain group of symptoms that we have been associating with influenza, and because it is imputed to the pathogenic action of the particular bacillus discovered by Pfeiffer and named after him. The inability of many bacteriologists to discover this organism in influenza-patients as also the fact that it was found present in persons not afflicted with the disease was explained in various manners, and the attempt was made to treat influenza-patients with a vaccine prepared from cultures of the socalled influenza-bacillus of Pfeiffer.

However, the results of this treatment were nothing to boast of, while the *bacillus-influenzae* vaccine evidently did not immunize the patients against the germ or germs actually involved. On the other hand, polyvalent bacterins containing a considerable number of microorganisms that frequently are found in the secretions of patients ill with respiratory infectious diseases did shorten the course of the disease, while there is insistent evidence that this preparation is capable of preventing the occurrence of the disease altogether providing that it is administered sufficiently early.

Regarding the presence of Pfeiffer's bacillus in influenza, Dr. Beverly Robinson (*Med. Rec.*, March 29) asserts that, in his opinion, too great importance is being attached to it. It may be found, and often it is, when there are general symptoms of a grippal nature; and, if so, the positive diagnosis of influenza is made. However, if this bacillus is not discovered, Doctor Robinson asks, should the treatment be any different?

Doctor Robinson evidently prefers to treat the patient for what ails him, instead of treating the name that may be tacked onto the aggregate of symptoms presenting themselves; and it seems to us that, ultimately, this view is far more reasonable than is the attempt, in every instance of supposedly bacterial disease, to isolate one certain microorganism and to blame it all on that one virus, which then is made the basis of a supposedly curative bacterin.

It is safe to say that in not a single bacterial disease, at least whenever the infection occurs through the respiratory passages, is the *causa causans* a solitary one. Almost invariably, the cause is multiple, a number of different bacteria con-

stantly being found in the secretions. On this account, we are of the opinion that the administration of multiple vaccines or bacterins is reasonable, irrespective of how "shotgunny" they may be. It may not be scientific. Indeed, we have a sneaking idea that it is better to be reasonable than to be scientific if science is not reasonable.

However, Doctor Robinson is quite right in insisting that the symptoms that are being declared in a certain case of illness should be recognized and that proper treatment should be administered, so as to remove the cause that is giving rise to them. If that is symptomatic treatment, let it be so. The present writer holds that symptomatic treatment very often is justified and is far better than "expectant" treatment, that expects to do nothing for the patient.

Observations during the last few years have impressed us with the idea that, strictly, the etiological treatment, in the sense of specific vaccine- or bacterin-treatment, is not always required. The purpose of such treatment being, to stimulate the production of specific antibacterial substances, any procedure that will bring about this result is calculated to be beneficial. For this reason, for instance, it often is better to administer remedies that produce a decided leukocytosis than to wait for the determination of a causative bacterium and then for the preparation of an autogenous or procurement of a stock vaccine or bacterin. By administering a dose of nuclein, for instance, the defensive mechanism of the organism is activated, so to speak, or its activity is enhanced. No time is lost, as it would be if the patients were left to the mercy of "expectant" treatment, without any effort being made to relieve the symptoms.

Perhaps we are too anxious to nail a definite "bug" in connection with every infectious malady that we are called upon to recognize and treat. We are prone to leave out of sight the possibility of taking measures for the relief of the consequences of infection. We forget that there are certain broad principles upon which, say, a fever-patient may be treated, even though the name of his particular fever may not be recognized. In our eagerness and anxiety to hunt for bugs, we are in danger of becoming onesided, of forgetting the patient in the disease, and of neg-

lecting that task that is imposed upon us when we are consulted by a sick person.

We can make ourselves uncomfortable to any extent with perhaps. You may stick perhaps into your little minds, like pins, till you are so uncomfortable as the Lilliputians made Gulliver with their arrows, when he would not lie quiet.

—Ruskin, "Ethics of the Dust."

OUR PROGRAM

As announced in an earlier number, and also on another page of this issue, we intend to have the June issue of CLINICAL MEDICINE an Automobile Vacation Number, and hope that everybody having had experience in vacation- or other pleasure-trips will write about it.

That is not all, however; we shall welcome communications from men who know through personal experience about everything concerning the automobile as a physicians' vehicle. We should like to have a few pictures of garages as they have been constructed, perhaps from original sketches or in so far as the arrangement is original. We remember, a few years ago, one plan in which a physician had housed the automobile very cleverly in the basement of his house, the approach being by a slight downward incline from the street. That would make for greater comfort in "boarding the ship" and leaving the house. Incidentally, it would prevent freezing, which is quite a problem in unheated garages, and seems acceptable in every way except one: how is the danger of gasoline explosion guarded against?

There are other things connected with the use of automobiles that must be of interest. Tell us about them.

For July, we are planning a discussion of the ever recurring subject of summer diseases. These do not afflict only babies but also children and grown-ups. Let us talk about babies' diseases by all means. But, let us not forget the children and adults.

For August, it is intended to devote particular attention to electrotherapeutic and other physical healing procedures, including light, radium, and, in short, all the physical agencies that have been developed so carefully in the last decade for the successful treatment of many acute and chronic maladies. Here again, much information and experience must be tucked away in the brain boxes of many of our readers. Let us not be clams but let us

share that knowledge that we have acquired in our everyday work and practice through painful experience. It may be that a relation of our difficulties and of our ways of solving them, even an account of our failures, may be of service to some brother physicians, and through them to many patients.

The influenza epidemic shows signs of abating. Probably many physicians are less busy than they were through the winter. Utilize a little of your spare time by thinking over your experiences—not on the subject of influenza (we have had enough of that), but on those matters to be discussed in the next few numbers. Sit down and write to us and let us all share in what you have learned.

ABOUT WRITING FOR PUBLICATION

In our editorial articles, as also in our editorial comments, and in our correspondence, we frequently ask for contributions from physicians in active practice because we are convinced that the personal experiences of men in general practice are of greater value to their peers, that is to say, to other men in practice, than are the more or less theoretical disquisitions of erudite clinicians who have methods and resources at their command that are not available to the man in the field.

Our frequent requisitions meet, we are grateful in stating it, with cordial response, and the "Let's Talk It Over" department of CLINICAL MEDICINE shows indubitably the interests that our readers take in *their own journal!*; for, make no mistake, CLINICAL MEDICINE is *your own journal* for you to make it as you wish to have it.

Naturally, we receive all sorts of communications from all sorts of physicians; some beautifully typewritten, double-space, faultless in diction and transcription; some in manuscript, though written clearly and evidently copied from a corrected draft; still others—Gee! all too often the editor throws up his hands and cries "Kamerad". He simply can not decipher the screeds and has to pass them on to the poor typewriter for copying before he can read the article submitted.

We admit freely that an article, or letter, jotted down off-hand is better than none at all; also, we remember having told you in the past that we are quite willing and glad to put your letters in proper shape.

Just write them down as you can and we will do the rest. To this we still adhere, only it seems to us that it would be of benefit to the writer himself if he were to take as much pains in preparing his own paper as he wishes us to take in getting it ready for publication. Moreover, a physician whose communications to a medical journal are written in hieroglyphics or in the form of cuneiform inscriptions stands a good chance that his prescriptions to druggists, and also important business letters, will fall into hands whose owners are not artists (as our operators are) in deciphering illegible handwriting.

The answer is easy. At the present time, the typewriter has become almost as much a household institution as has the telephone. It does not require a six-months' course in a business college to learn to manipulate the "typing" machine; in fact, a few hours of investigating study and fifteen to thirty minutes of practice a day will enable any man or woman of average intelligence to master the mechanical intricacies of the typewriter so as to become quite proficient in its use. We ourselves never did take a course in typewriting, yet, we use the machine in preference to the pen, in fact, we can write more rapidly with it than we can by hand; and, certainly, more legibly.

Another thing, if we once have become accustomed to use the writing machine for everything that we wish to put on paper, it will prove a great source of comfort and

convenience. Not only articles for publication, but letters, mainly business letters but also personal ones, are readily gotten out with greater ease than in the old way, and there is the great advantage that one can always have a carbon copy of everything written. In writing prescriptions, the typewriter makes mistakes virtually impossible, and the same is true in writing out directions for office patients. Finally, the youngsters, once they have become old enough to treat the typewriter with due respect, will joyfully embrace the opportunity of preparing their little themes and compositions, cleanly and neatly, and thereby merit the glad approval of teacher.

While we do not "kick" on receiving pen-written letters, we do say that it is a joy to receive a nicely typewritten communication. But, whether typewritten or pen-written, a clean, tidy letter or article reflects upon the writer himself. Writing on any old scrap of paper, with the stub of a pencil, or with a scratchy pen, or with a chopstick, in scrawling characters, on both sides of the sheet, with copious erasures and interpolations—all these things necessarily tend to irritate the editor who is but human and often very busy. Such strenuous (in the work required to decipher them) communications sometimes are laid aside until the more attractive ones are considered. Suppose you buy a typewriter. It doesn't cost so much and the advantages are far greater than the cost.

OPTIMISM

"IT is just as easy to go through life looking for the good and the beautiful, instead of the ugly; for the noble instead of the ignoble; for the bright and cheerful instead of the dark and gloomy; the hopeful instead of the despairing; to see the bright side instead of the dark side. To set your face always toward the sunlight is just as easy as to see always the shadows, and it makes all the difference in your character between content and discontent, between happiness and misery, and in your life, between prosperity and adversity, between success and failure."—Orison Sweet Marden.

Leading Articles

A Tribute to Beriberi

By HARVEY W. WILEY, M. D., Washington, D. C.

BERIBERI is the Japanese name of a disease that apparently is of modern origin. Its Greek name is, polyneuritis, and its common name is, dietary deficiency. The occurrence of beriberi, the discovery of its cause and a successful method of its treatment have created a new era in dietetics.

It is one of the curious antitheses of medicine that some one has to suffer, man or other animal, in order that the scientific observers may search for the real cause of the trouble and seek for its remedy. The sufferings which these martyrs endure in the end become blessings to humanity. If John Harvard had not died, at the age of thirty, of tuberculosis, Harvard University would never have been founded. It is undoubtedly true that the old expression "The blood of the martyrs becomes the seed of the church" is well founded. The heroes who gave their lives to determine the real cause of yellow fever are deserving of lasting monuments and undying fame. Beriberi and tuberculosis ought not to be forgotten.

Up to the era of the discovery of the cause of beriberi, the principles of correct diet were based upon the supply of a so-called well balanced ration. We were taught that the human animal, in order to grow, enjoy health and be able to multiply his species, required a certain proportion of food giving a definite evolution of heat and supplying the needs of growth and repair. We were taught that this balanced ration consisted of certain amounts of protein, carbohydrate, fat and minerals. Much to the astonishment of the physiologists, it was discovered that, when an animal was fed pure protein, pure carbohydrate, pure fat, and pure mineral, it failed to grow, gradually lost weight and finally

died. The peculiar contrast was presented of impure foods, that is, impure from the chemical point of view, being far better than foods that are pure from the same point of view. Then came Funk and his followers inspired by the discovery in regard to beriberi, who disclosed to a certain extent the nature of the vital element in foods. From the Latin word for life and because he believed it to be of nitrogenous character, Funk called this new substance vitamin, in other words, the amine necessary for life. Whether or not the assigned reason is a correct one, the name seems to have come to stay, whatever the final chemical nature of the vitamin principle may prove to be. This discovery incited physicians, physiologists and biological chemists to look further into the nature of many common diseases.

It had long been known that scurvy was related in an intimate way to foods. It was particularly a scourge for sailors under the old fashioned methods of travel when, often, they were many months at sea and had no access to fresh meats, vegetables or milk. Before the days of beriberi, it was discovered that citrus fruits, or their juices, proved to be antidotal to scurvy. It was not a difficult step to show that scurvy also was a disease of dietary deficiency and that the citrus fruits, fresh meats, vegetables, especially tomatoes, and milk had antiscorbutic properties, in other words, contained a vitamin antagonistic to scurvy. Pellagra also was suspected of being a disease of dietary deficiency and this assumption has been proved correct by the investigations of the scientists of the U. S. Public Health Service, who have been able to produce artificial pellegra, or, perhaps, I had better say purposeful pellagra, just as beriberi and other forms

of polyneuritis are produced in the same way.

Our whole system of diet, therefore, has to be reconstructed from the discoveries of the last 15 or 20 years. These discoveries have particularly emphasized the food value of the external coatings and germs of the cereals. This value rests not alone in their content of ordinary digestible foods, but exists particularly by reason of the water-soluble vitamin contained therein. One of the easiest experiments to carry out is, the production of beriberi in fowls by feeding them polished rice, bread made of white flour and degerminated and decorticated Indian corn meal. The production of pellagra is much more difficult but not at all an impossible experimental problem.

In the comic papers, we have all been regaled by the cartoons entitled "Bringing up Father". A similar course of instruction is necessary for the medical profession, especially those of us of the older school. As I recall my own medical training, I can not remember a single lecture on dietetics that had any kind of a foundation except pure empiricism. In as much

as food has such an intimate relation, not only to prophylaxis, but, also, to therapeutics, we need a series of cartoons or some similar form of instruction illustrating the bringing up of the old doctor. Perhaps there is no point in medicine so confusing and conflicting as the dietaries prescribed by the attending physician in cases of illness, and, likewise, for children and grown persons as a preventative of disease. The very foods that have been most denatured and, therefore, are least wholesome and assimilable, are constantly prescribed by physicians for the well as for those ill. The function of leaf vegetables, for instance, so important in dietetics and carrying as they do the chief fat-soluble vitamins, are those that the physician too often neglects. On what scientific grounds can a physician recommend the most refined foods, those of least nutritive value? By reason of a fear of irritating the stomach. Bromato-prophylaxis and bromato-therapy are two themes in our medical education that can no longer be neglected.

Let us bring a tribute to beriberi as an incitant to fruitful study.

A Commonsense Essay on Diet

By GEORGE F. BUTLER, A. M., M. D., Wilmette, Illinois

Medical Director, North Shore Health Resort, Winnetka, Illinois.

THE subject of diet, even in its main ramifications and without going into minutiae, is of so vast a nature and entails so many consequences, good and bad, that a big book might easily be filled up with it. In this dissertation, I shall content myself with discussing some of its fundamentals that are not frequently enough considered, adding such details of illustration and experiment as seem sufficient to afford a good working-knowledge of the principles involved. In this, as in the other branches of applied therapeutics, the real teacher is one who judiciously combines intelligence and practice. I can scarcely more than indicate the direction in which this intelligence and this practice are to be exerted.

As soon as we have accepted, as we must do at the outset, the scientific (and moral as well) dictum that "So much of food and drink is to be ingested as will refresh,

not, oppress, the powers of the body," we are at once confronted by what appears to be something impossible; namely, to make a correct estimation of the digestibilities of the different nutriments, together with the digestive ability of each individual. But, at this point, we must remember that the practice of dietetics rests upon the cumulated experiences of mankind; that it is not a new problem, to be solved by a series of algebraic equations, that much of this knowledge has already been digested for us through a long acquaintance of the human mind with its practical aspects, and that out of this ages-long familiarity there has emerged a first and all-important law for our guidance, which law demands temperance—a term that stands for the affirmative *enough* as strongly as it does for the negative *not too much*. However much in the dark we still may be as to the proper course to steer be-

tween these landmarks, we know that they are there. And this is the first essential step toward finding them, even though we already know that their positions in the life-stream vary with the passing of every vessel between them.

Racial More Than Individual Importance of Dietetics

To begin the question at its logical basis, we doubtless should understand, as a premise, that the problem of diet neither stops nor begins with the individual, that the life of the race is alone the proper criterion, and that only the future can speak with authority about any present deviations from such rules of diet as have been established by our fathers by testing, rejecting, adopting. For, it has already been shown that a diet that may make for apparently full vigor and well-balanced living in one generation may not suffice to carry on the germ of full vigor to the next generation. Of course, it would appear at first glance that a vigorously nourished organism would be better able to procreate its like than can an organism of inferior energy; still, experience demonstrates that the vigor of the parent-cell, the germ-cell, may be quite different from the vigor of present living tissues and organs; the latter merely exhibiting in detail the powers peculiar to each, while the parent-cell combines and concentrates within itself the potencies of a whole organism; so that, in fact, it is anything but an unusual occurrence for physically and mentally weak specimens to spring from the loins of the seemingly physically and mentally strong. That science can not escape or evade these fundamental facts, adds immeasurably to the complexity of the subject of dietetics; for, it is food that has formed the soil from which all men have sprung originally, no matter whether they be weak and feeble or strong and robust.

When we have studied digestion in the test-tube and retort, thus determining the coefficients of digestibility of the various foods, the result is a purely chemical one. We are not thereby informed what will be the relation between the same food-elements and the amount of digestive energy which their stimulus will incite in the living tissues of the body. Moreover, it is found that, not only does each different food meet with a different response from the tissues, but, even the same food elicits different responses from the same

body at different times, the organism being very far from a constant entity.

Force Generated Not in Direct Ratio of Food Ingested

Furthermore, the power of extracting the nutritive elements from the food varies greatly with a given individual, as also with the same individual at different times. Also the power of absorption, of storage, and of synthesis of these constituents—that is, assimilation—varies with the individual and his condition of health, as does the power of developing energy from these potentials. The extracting powers belong to digestion proper, and the variability of the process may be evidenced by the food remainders. The powers of absorption, storing, and building up the materials prepared by digestion are anabolic. They induce an accumulation of potential; but, in proportion to the *quantity* of this potential absorbed, its availability in respect of its *site* of storage, and its availability according to the *stability* or *instability* of the synthesis formed, will be the efficiency of the individual's assimilating-strength.

The powers of developing energy from the potential in storage are katabolic, upon the completeness of which all depends; namely: the reduction of the complex molecules to their simplest expressions, as well as the rate at which this fall of potential occurs. This, also, is individual and will vary with the stages at which the degradation of the complex molecule is arrested, and with the rate of downfall, whether fast or slow. Therefore, when we are told that so and so many units of nutritive constituents have been taken in, and that these units, as a result of complete combustion, will develop so and so many heat-units, then, what we really wish to know is, how many nutritive units have been extracted and stored by this particular person and how much of the potential energy so introduced will be available for his use?

Moreover, another difficulty arises in this very question of utilization. If, as a result of combustion within the tissues, a certain number of energy-units has been realized, how will such energy be utilized? The body requires many and various kinds of energy, here, heat for warmth of the organism, there, electricity, in another place, mechanical force through muscular contractility; while some chemical combinations must be released at the cost of so

much energy, that energy which is locked up as potential. Because this much energy has been realized, it does not follow that it will be transformed with ease and economy in all its units; for, there will be waste and leakage at each transformation of one form of energy into another, the human organism not being a perfect transformer. In fact, it has been demonstrated by Daniell that a man's body is capable of utilizing only one-fifth of the total energy supplied as heat. This is the average amount, from which individuals diverge greatly in one direction or the other.

In the same way in which, in mechanics, we have high-grade and low-grade machines, and also machines that can be changed from one grade to another by means of different gearings, we find that the human body works: It is not one machine, it is many machines in one, and, what we shall receive from it in the way of service depends upon our skill of treatment of it.

The fact that we are so constructed that we are able, at times, to extract and employ more or less energy from food is the explanation of those different levels of power at which we live, our vitality sometimes being so low that our productive ability is practically *nil*, while at other times we are so full of life and daring that nothing of achievement seems beyond us.

We know that the will may play a vital part in these transformations, and many an element of the mind attends either in hostility or in friendship the processes of digestion that cluster around mere food; so that, in the problem of diet in any given case, much may depend upon the spirit in which that food is taken and in what circumstances, of which latter there are many besides the physical, any one of which may overturn and reverse, if not actually annihilate, the purely physical.

Diet Founded Upon Experience

The basis of diet is, of course, the habit of the people, the custom. What has been tried and found wanting is thrown out, leaving that which has proved good to constitute our daily nutriment. In health, we find this diet sufficient as long as we observe temperance; always understanding that the rule is to be varied for each person according to his individual needs. For these divergencies, we also have rules that likewise are founded upon experience.

Nevertheless, it is here that the difficulty of the personal equation assumes its most forbidding aspect in the eyes of the dietician; for, he knows that, until he can determine, far more effectually than he can now, the individual power to extract and store potential, and, having stored it, to convert it with the least possible waste into the various active forms of energy manifested by the tissues, it will be useless for him to calculate the number of heat-units supplied by a given quantity of food. Nevertheless, there is an affirmative side of the subject of dietetics, even for the individual, and this I will now consider.

The Amount of Nutriment Needed by the Body

The lowest estimates of the food necessary for the human body put the proteid required at about 29 Grams. In order to supply the calories required for the various vital processes, and the loss of heat through evaporation and radiation, there must be supplied about 50 Grams of fat and 300 Grams of carbohydrate. Although every Gram of fat is, theoretically, worth somewhat more than 2 Grams of carbohydrate, there is so much loss, from natural lack of digestive power, when the limit of 100 Grams of fat is reached, that this ratio fails; and a ration of 150 Grams of fat is attended both with great waste and disturbance of the digestive and absorptive power in general, as well as the danger of intoxication from fatty acids and formation of acetone. Therefore, leaving out water, salines, iron, and so on, the organic requisites of the body must amount to not much less than 500 Grams of water-free, chemically pure proteid, fat, and carbohydrate; and this allows for reduced oxidation in disease, free use of external heat, and clothing to conserve the internal heat.

Now, the first point in combining a diet (taking for granted this knowledge of the average needs) is, to ascertain the previous feedings and habituations of the patient. There, manifestly, is something that he has been eating that either should be stopped or modified, although this does not always follow. As a rule, articles of diet that come in for prohibition are the semimedical ones, notably, alcoholic beverages, tea, coffee, cocoa, tobacco, spices, vinegar; foods that are too hot or too cold; those containing oxalates and other poisonous chemicals; those rich in purins;

tainted or fermenting or rancid foods; those containing an excess of innutritious substances, and those which, although good in themselves, would work against a proper metabolism in this particular case; besides various others.

Need of Written Dietetic Prescriptions

It is as necessary to follow the plan of giving written prescriptions in dietetics as it is in drug-therapy, bringing the formula into terms of proximate principles. From the practical standpoint, these "proximate" principles include water, sodium chloride, iron, iodine (as in thyroid extract), lecithin; the three organic nutrients—proteid, carbohydrate, fat, and gelatin, as a substitute fuel-food. In theory, and to some extent in practice, there should be added the consideration of calcium, magnesium, potassium, sulphates, purins, phosphates, and extractive substances generally, as well as more or less inevitable accompaniments in raw-food materials, the toxins and innutritious substances. Unless we are dealing with a lack to be made up, as in anæmia, or a surplus to be taken care of, as in obesity; or, unless some particular metabolic disorder, such as diabetes, makes bad that which ordinarily is good, the dietetic prescription can be brought approximately to the following, whatever the character of the disease:

Water, 2500 mils, about 2000 mils, as such or at least in the form of some aqueous beverage;

Salt, 10 Grams;

Iron, 10 centigrams;

Proteid, 50 Grams or even as high as the earlier standard of about 100 Grams;

Carbohydrate, 300 Grams;

Fat, 50 Grams.

The two articles last mentioned are interchangeable, within limits, in the ratio of about 2 of fat to 1 of carbohydrate, while gelatin may be substituted for carbohydrate up to about 50 Grams in even proportion.

With reference to the vicarious function of fats and carbohydrates, there never is any need of eliminating such amounts of fat as are present in ordinary foods without being recognized as such, as, for example, the 1 percent of fat present in milk, the 2 percent in fish, the 6 percent in breakfast-foods, the 9 percent in crackers, and so on, percentages that make it possible to give as much as 50 Grams in a diet which the laity suppose to be fat-free.

It is difficult to avoid giving as much as 10 Grams, while 30 to 50 Grams can readily be added by injunction, even though we are not certain of its being assimilated.

About all of the ordinary foods contain, as I have pointed out, the three organic ingredients in different forms and proportions, from which fact arises the difficulty of deciding upon the amount to administer of the respective foods; there being likely to be present in some of them too many or too few of some one or more of one or the other elements. Still, by restricting ourselves to a certain number of food-stuffs, we may make up the proportion in accordance with this *general law*:

When the number of independent equations equals the number of those unknown, the latter can be determined. When these equations are actually worked out, one, at least, of the unknowns is likely to become a negative quantity; for, while we can always determine algebraically the amounts of certain foods required, the practical results invariably indicate that there should be subtracted from the dietary such an amount of proteid, fat, and carbohydrate as is contained in a certain amount of one of the foods—and this, of course, is impossible. Therefore, in translating a primary prescription for proteid, carbohydrate, and fat into nature's approximate galenicals (the natural food-stuffs or even proprietary foods), we must proceed by rule-of-thumb. For example, let us take the proteid ration, which can not be replaced by carbohydrate or fat, and is the most definite one of the three.

If we use pure proteid or lean meat, or meat extracts or even milk, all of our raw material will be exhausted in administering the proper ration, without going further than a mere beginning on the requisite quantity of carbohydrate and fat together—although, in milk, the proportions of proteid and fat are so nearly equal that it is easy enough to furnish sufficient fat with the proteid. Thus, the difficulty is, to give nearly pure carbohydrate or mixtures of carbohydrate and fat for the remainder of the mixture; for, while theoretically this is easy, since we have olive-oil, butter, clear salt pork, and so on, as well as the various sugars and syrups, such as corn-starch, sago, tapioca, and so on, in practice, such a diet rarely proves tolerable. In the cereals, including bread-stuffs, there is a nearly correct proportion

between proteid and carbohydrate, the ratio ranging between 1 : 4 and 1 : 7, and it is easy to add a little sugar or butter, and so on, to such a diet. There is, probably, no natural food-stuff that contains the proper proportions of all three of the organic ingredients necessary for an adult, and none that is tolerable that contains the required amount of fat and carbohydrate that can be added to a food disproportionately rich in proteid.

Meat Necessary

For ambulant patients and for most others, some meat is required, not only empirically, but, to supply the needful iron. In the vegetable foods, the iron-content is too small, as a rule, although many stems and leaves contain variable amounts. However, such iron-containing vegetables often are contraindicated, by reason of their lack of organic nutriment, as well as because of the difficulty of their digestion and liability to fermentation, holding, as they do, large proportions of cellulose; and, although iron may be added in the form of hemoglobin or some derivative of it or also in organic form, we can not determine how much of it is assimilated. Therefore, in practice, we usually find it difficult to administer enough meat-proteid to provide for iron, without increasing the ratio of iron in the dietary. There is not, and probably there can not be, a strictly scientific, mathematical method of determining the ration needed.

All Estimates Empiric

Such estimates as we have are based upon empiricism, the diet being gradually reduced or increased until nitrogen and weight equilibrium have been secured, at least approximately. Chittenden's method was, to find how little proteid could be given without entailing loss of tissue. He made no attempt to reduce the bulk or the content of fat and carbohydrate of the rest of the food. But, Voit and chemists generally have measured the consumption of food as regulated by a diet moderately restricted. The extreme lack of proteid, and, consequently, of tissue-oxidation secured by Chittenden's method seems to have decreased the output of heat and energy in the body, diminishing the call for fuel-foods. As yet it is a question which of the two rations is the more hygienic.

Food Dosage

The dosage of food, as of medicine, depends upon the size of the body, and,

therefore, indirectly upon age, sex, and so on; so that, in the case of growing children, there is a disproportionate need of the depositable food ingredients (proteid and fat), as compared with carbohydrate, which can not be stored in quantities larger than about 250 Grams. Although there is scarcely an analogy between this and the dosage of drugs, there are, in their effects, idiosyncrasies similar in character.

As a given remedy may produce results much beyond, or much short of, those intended, so it may be with foods, an obese patient often retaining his fat on an abstemious regimen, while the diabetic, let him eat what and as much as he can, will grow thin. Of course, in all cases, the state of the patient's digestion and absorptive powers is a factor that must be closely taken into consideration in arranging his dietary.

In administering food, there is no very close analogy with the cumulative effects obtained by the administration of the alkaloids; for, the active organism is capable of ingesting and assimilating a large excess of the various organic foods without showing much evidence of damage done; although there may be the mechanical effects of a dangerous nature, such as intoxication caused by products of decomposition by microorganisms, or poisoning by strictly toxic substances (such as purins and oxalates), and toxins arising from bacterial or other chemical change before ingestion.

Food Dosage and Drug Dosage

Although it is true that we can not always secure the reaction between drugs and the tissues that the prescription is intended to produce, we can generally manage to give, in some way, the full dose desired, except in the case of drugs acting locally upon the alimentary canal; while, on the other hand, the dietitian often is unable to administer an adequate dose of food in any manner, especially in the most serious and acute cases; and this difficulty almost always obtains when, whatever the reason may be, food can be introduced neither by the mouth nor by a gastric or superior intestinal fistula. There never can be introduced more than a small part of the organic ration by way of the skin and subcutaneous tissues, and, although it often is mechanically possible to introduce a full ration into the lower bowel, we practically never can secure the retention,

for a satisfactory time, of more than half the ration, over a period of two or three weeks. Even when this half-ration is retained satisfactorily (which often it is not, owing to a faulty method), absorption always is deficient and assimilation more than unsatisfactory. Therefore, these and all other substitutes for feeding by mouth must be recognized as makeshifts from which not too much should be expected.

The difference between the food requirement of the healthy and active body and that of diseased persons is, of course, great, and experiment will, probably, never be able to adjust it with scientific accuracy, although it can do much. We know that, in certain stages of certain cases of diabetes, there takes place an enormous oxidation of protein of food and tissues, which certainly is not purely compensatory of the failure of sugar oxidation, since, as a rule, it can be reduced nearly or quite to the normal by decreasing the ingestion of carbohydrate. But, we do not know just how far increase of oxidation by hyperpyrexia compensates for or exceeds the oxidative demands of exercise, nor what influence antipyretic measures, such as light covering in a cool room,

bathing, sweating, and so on, exercise upon the calories required; neither do we know how far the demand for protein is modified by the various febrile diseases. Probably the safe rule is, to give nearly the full ration for virtually every disease, whenever this can be done, excepting in conditions that render it possible to disregard nutrition altogether for the time being or where there is an obvious indication to reduce one nutrient in favor of another.

There are at command many simple sample diets and clinical methods of computing rations, and so on; however, probably the best way of insuring an adequate prescription of nutriment is, to consult tables that give the different food compositions and calculate from them the available organic ingredients and calories. Although there is no simple method of determining how much food is actually utilized, it may fairly be assumed that good assimilation has taken place if the feces are moderately consistent, not too much fermented or putrefied, and show no curds, oil, and undigested masses.

[*To be continued.*]

Popular Education in Dietetic Economics

By A. L. BENEDICT, A. M., M. D., Buffalo, New York

IN view of the various propagandas of popular nature, it may be allowable to suggest that one more should be undertaken, especially since no apology has been offered for systematic instruction of the laity in regard to the early diagnosis and general principles of treatment of cancer, about which the medical profession still is in almost absolute ignorance. It is doubtful whether a special philanthropic organization should be formed for this purpose, only further to tax the benevolent and to maintain working-staffs and to increase the revenue of paper-manufacturers, printers, and the post-office. Still, if the medical profession and existing organizations for educational or philanthropic purposes take up the subject seriously and deal with it intermittently, as occasion may offer, much can be accomplished, perhaps all that need be desired; for, the people are eager for instruction, and the existing peri-

odicals, from newspapers to professional journals, are ready to publish educational articles.

It is not intended in this article to go beyond some general principles and a tentative discussion of a general plan of popular education that would have to be elaborated by criticism and expert knowledge along various practical lines before it could be made workable.

Let us begin with the optimistic fact that this country of ours produces considerably more than the food required by its present population, and that production can be increased by methods at present practicable, so as to support at least five times its present population, merely by proper adjustment and putting known means into effect. An increase of population, especially if distributed so as to bring the density of parts at present scantily populated up toward the average, will increase the cost of

certain foods, especially of meats, while, if the population is increased by the growth of cities, transportation- and distribution-expenses will increase the cost of most commodities, especially those requiring prompt delivery and care in handling, as, for example, milk, fresh fruits, and vegetables.

Law of Supply and Demand Not Controlling

Not much can be expected from the law of supply and demand as ordinarily understood. On the contrary, it usually works in an opposite way. For example, an over-supply tends to reduce price, the consumer benefiting temporarily by getting bargains; production thereupon is discouraged and the price rebounds, often beyond its normal level. On the other hand, excess of demand raises the price, stimulates production, renders economy feasible in production and distribution, lessens losses from lack of sales, and, yet, through these same causes ultimately tends to reduce price permanently.

But, subject to possible economies in production, transportation, and so on, and the general business-principle, which even telephone-companies began to learn before the war—that it is better to sell a good deal of a commodity at a reasonable price than only a little at a fancy price—price will ultimately be controlled, not, by supply, but, by demand—the demand of the various forms of capital and labor involved in production and distribution—for, as great return as can be got from any other form of industry, by the particular person or firm concerned or by those considered as analogous with regard to earning-power. Perhaps it would be more accurate to say that each individual concerned wants a little more than he is worth or than his analog is getting.

In plain words, food will be priced upon the same general basis as plumbing, carpentry, gasolin distribution, brokerage or any other industry, with due reference to the earning-capacity of those concerned. As food is an urgent necessity and as the ultimate producer is rather better circumstanced than are most workers as to a home, a supply of longlasting necessities, and the ability to feed himself and his family, in other words, is assured to a large degree against actual want in anything that may be compared to a strike, the consumer is really more at the mercy

of the factor of demand with respect to food than to any other commodity.

Of course, the food-consumer would like to see his own wages or salary or profits go up and those of the farmer and his hired man and of others engaged in food-production and distribution keep at the former standards. Just as much wheat or potatoes will grow on an acre as formerly, rather more; it requires no more acreage to produce a gallon of milk than formerly, possibly less; chickens can pick up their food and the farmer's children can pick up the eggs, they can be put into a basket of oats and sold at a cent apiece just as formerly. The coffee, tea, sugar, tin ware, calico, and so on, which the farmer had to buy cost no more than formerly, even at war-prices, and their normal price is considerably less. There really is no reason why food should go up in price, except for the wishes and demands of the man that produces it. For that matter, anyone that is solely a consumer of food can go back to the farm and have the major part of his sustenance at a cost too small to be counted at all, if he chooses. Why doesn't he?

The Middleman Is Needed

The elimination of the middleman has been suggested as a panacea. The technical objections to this can be better treated by more expert economists; still, some practical illustrations of what would result may here be suggested. The next time, when some cog or chain or other intermediate part of your automobile gives trouble, take it out. After you have had it fixed and put back again, drive out into the country and buy a bushel of potatoes or a dozen of eggs or a pound of butter at a farmhouse—if there is one accessible and the owner wants to be bothered with your small purchase. Then go to the market and see how much you have saved or lost. Or, in a more general way, try any of the producer-to-family schemes, and, with due regard to quality, calculate how much of the middleman's profit you get. One minor although extremely important practical point is, that the producer—farmer or otherwise—reads the papers and knows just what the market-price chances to be. And, he insists on getting it, too.

There are, undoubtedly, extortionate and dishonest practices by middlemen. So there are on the part of retailers, transporters, producers, and consumers. All these should be dealt with rigidly and im-

partially, as all tend to increase the cost of living.

Fairness to All Required

We are just beginning to recognize the fact that, while "*caveat emptor*" is a high-sounding and ancient injunction, it does not represent a principle either of ethics, law or economics. Nevertheless, we should not go to the opposite extreme and disregard the rights of the seller. The rights of everybody should be equally and equitably enforced. They must either be enforced by existing machinery of government, extended as necessary, or a government within a government, designed to deal informally with economic questions, must be established. It is questionable whether the reluctance to extend the domain of government so as to insure to each individual adequate return for his labor and to insure his fellows against his getting an excessive return, should be carried to the extent either of maintaining existing economic evils or of establishing a secondary union of people, to secure their economic rights by some form of economic coercion.

It should be recognized, however, that experiments with consumers' leagues for the most part have failed and that similar combinations of producers, to eliminate the middleman and retailer have, if successful, not tended to the welfare of the consumer—oranges, for example.

An even broader view of the economic problem involved is necessary. The great bulk of the business of the country is, properly, transacted with money, and, while the vital necessity of food renders this conspicuous, it makes no difference, up to the point when extreme and exceptional poverty excludes every other consideration, as to the food, whether too high a price is paid for food or for anything else that virtually is necessary. If, for example, one uses 500 gallons of gasolin a year, and he pays, unnecessarily, 10 cents a gallon more than he did the year before, that \$50 difference could be applied on food just as well as a saving of that amount on food, itself; and so on for telephones, telegrams, railroad-fares, shoes, taxes, and everything else. The farmer or poultry-raiser may be getting too much for his labor, and, on the other hand, it is possible that the plumber, electrician, and automobile-mechanic should not charge more per hour than does the carpenter and the painter. At

any rate, a saving, by the ultimate consumer, on any kind of labor will buy him more food, just as well as if the food-producer's or food-dealer's charges were reduced.

Needful Study of Food-Economics

All are consumers, not only of food, but, of various other services and commodities, and all ought to be, for the greater part of their lives, producers of some service or commodity of a useful nature.

The problem of food-economics can not be satisfactorily solved on the theory, often implicitly assumed, that it can be separated from the general economics of production and distribution, still less on the assumption that food can be produced and distributed by workers at a less rate than their corresponding degrees of skill and industry are worth in other activities that these workers may actually or potentially be competent to perform. The principle should be recognized that the same degree of skill and industry should have the same pay in any line of work, that an abnormally high pay for any kind of work will tend—quite rapidly in these days—to compensatory increases of wages in similar industries, and that, after or even before, a general increase in wages has been compensated by withdrawal of wealth from amassed capital or abnormally highly paid positions, the result will be a diminished purchasing-power of money, so that the increase in wages is fictitious. This means, not merely that the average man must think in higher monetary terms, receiving and expending more than formerly, although breaking even so far as actual standards of living are concerned, but, that business and employment will be hampered by a relative reduction of the circulating medium of exchange.

Employment will be reduced, not merely because the prospective employer still is thinking in previously established values and will postpone work until it is absolutely necessary, but, because it is actually difficult to obtain sufficient money or credit, since the amount of money increases but slowly. Unfortunately, while the average laborer is quite inclined to make the pessimistic statement that he is no better off at present than at his former wages, because of the higher cost of living—meaning that the other fellow also is getting higher wages—he can see no other remedy than a further increase for himself, so that

we are, in an economical sense, chasing the devil around a stump.

While food can not be separated from more general considerations of economics, it does, as a matter of administrative detail, deserve special attention; indeed, almost every kind of food should be especially and expertly considered with reference to a possible reduction of price or substitution of a cheaper food of equal value.

Campaign on Food-Economics Suggested

Much of the complaint of the high cost of food could be removed by a popular education in food-economics. For practical purposes, a campaign of education should be conducted mainly along three lines; namely:

1. Every consumer of food should know the minimum standard rate (not the occasional bargain-price made for a "come-along" or owing to a temporary excess of supply over demand) at which a given commodity has been sold in the past or is being sold in a comparable community or one that may be made comparable by scientific attention to methods of transportation and distribution. This will give him an idea of the price-goal toward which he may, by constant and united demand, strive. On the other hand, both as a matter of justice and to save him unavailing effort, he should understand whatever real obstacles there exist to the restoring of former prices. Thus, it is obvious, for example, that milk, elaborately protected against infection, bottled instead of vended "loose", produced by regular industry involving large capital and skilled and careful labor, transported to greater average distances, and distributed on an accurate time-schedule, can not recede to the price of carelessly handled milk sold as a by-product from a suburban farm. The same argument applies to many other foods.

But, even this argument should not be granted without investigation. Many foods can be enormously increased in yield per acre by fertilizing and employing skilled labor, without correspondingly increasing the costs. Potatoes, for example, by intensive methods, may be increased by from 75 to 300 bushels per acre. And, without reference to acreage, the same general principles of efficiency apply to food production as they do to manufactures.

2. The consumer should also know the

current possible low price in his own community. This information has recently been published and the practice should be continued, with explanatory notes including the general principles of the first consideration.

3. The average consumer is very ignorant of comparative food values, both in the commercial and the physiologic sense. As mentioned in a previous article, much of the most expensive land and labor is devoted to the production of coarse vegetables that the average person regards as necessary high-food-value articles, but, which are of almost no value except as relishes and stimulants to peristalsis. Not only is he paying high prices for virtually nothing, in the nutritive sense, but, his large demand maintains high prices, while, in many instances, there is actual deficiency of nutrition, because of this ignorance.

Failure to allow for gross waste results in a very general buying by the poorer class of meats, at extravagant prices, when the ultimate nutritive value is considered. Barring a few fancy cuts, it is ordinarily true that the kinds of meat sold at the highest prices per pound are the most economical. During the meat-strike, a few years ago, enormous quantities of small fish were consumed, at a cost per unit of nutrient considerably higher than that for mammalian meat, against which the strike was conducted, not to mention the qualitative nutritive superiority of the latter. In many instances, the people are actually *mis*-instructed. One can hardly ride in a streetcar without learning of the high food-value and economy of various cereals. No actual misstatement is offered; still, the people do not realize that all that is said of this or that proprietary preparation applies with equal force to standard cereals in bulk and to bread, and that the former cost from two to four times as much as the latter for equivalent food-values. An important minor detail requiring careful investigation is, the price of crackers. These consist of unleavened bread, they do not involve much waste because of rapid depreciation and should be economic in every sense. It may be that the explanations as to the cost of manufacture are correct; yet, they should not be accepted without careful examination by competent, disinterested authority.

Medicine Socialized

By CHARLES ELTON BLANCHARD, M. D., Youngstown, Ohio

[Concluded from April issue, page 275.]

Advantages Promised by His Plan

NOW let us offer a few specific observations.

A publicly paid and nationally or state-organized medical service would tend to restore and keep the needed confidence of the people. The sick and injured could, and would, place themselves in the doctor's care, knowing that no possible motive can enter into the relationship, except the study of what is best to do for the one needing help.

There would be no depressing worry about the grievous expense in commanding the very best of skill, as now is the case. It would place the concerted skill of the entire medical fraternity of each center, and, if necessary, that of the whole nation or world, at the command of the patient or his attendants. There would be no fear or quibbling about counsel. Now, many times a physician hesitates to call for aid, because he may fear that his reputation will suffer or his patrons lured from him. If he is not altogether sure of his diagnosis and treatment, he fears that another called in counsel will repudiate him. Our ethical code is very strict in matters of counsel, still, every doctor can, if he will, tell you how many times he has been worsted by a brother physician that he or the family called to his aid. If the doctor called is friendly, he will say: "Yes, yes, the Doctor here has done exactly the right thing. No mortal man could have done more." Many times, he knows that he is lying in order to uphold his fellow. He may need like help, himself, some time.

If, on the other hand, the doctor called in consultation is honest and none too friendly, he may, out of regard for his code of ethics, let his colleague down as easily as possible; still, the decided changes in treatment and in methods employed, especially if the outcome is a speedy recovery, can not fail to result in an economic injury for the family-physician, and it usually cuts that family and their relatives and associates from his list.

It yet remains to be shown whether the disease was not just at the turning-point,

of, say, pneumonia or typhoid fever, and that, had no counsel been called, the same good recovery would have been the outcome.

Criticism Answered

Criticize my position as you will, find all the difficulties possible for the introduction and conducting of my plan; still, every step in our national and our race evolution brings us nearer to this change in medical service. Even now, it is being industrialized and commercialized. It should be made an out and out socialized work.

The smug highbrows prospering under the present plan will say that I am just another Don Quixote fighting windmills or, that I am setting up a thing of straw, to throw brickbats at; that I am one of the outs and want to get in. My answer is: Never mind me. I am nearing the end of my medical career. There is not a personally selfish word in all that I am saying. We have now won the victory over John Barleycorn, we are about to win for woman her political rights, and our next step should be, to destroy the evil, graft, and inefficiency of private medical practice. I would willingly leave it to a referendum vote, when the public has been one-half as well educated on the subject as it has been on the liquor-and woman-suffrage questions.

It has been said that the doctor is the luckiest of all business men, because "the world publishes all his successes and the earth covers up his mistakes!" Now, this was supposed to be a good joke, and you will find running all through the world's literature this tendency to belittle the physician's dignity. Lord Byron said: "Physicians mend or end us; but, though in health we sneer, when sick, we call them to attend us, without the least propensity to jeer." Pope, with more careful thought, wrote:

"A wise physician, skilled our ills to heal,

Is more than armies to the public weal."

Nevertheless, our good old Ben Franklin could not resist the temptation to say, "God or nature heals, and the doctor takes the fee."

Now, my friends, let us have a good dis-

cussion, or a good cussin', just as you may choose.

DISCUSSION

QUESTION: Is not the present system of municipal, state and national health-service developing a system of socialized medicine as fast as public opinion will accept?

DR. BLANCHARD: Most of our health-officials are competent men, doing the very best they can with the means and authority placed in their hands. The trouble with our kind of democracy is, that we must do everything by a patchwork method. What knowledge of medical things has the average politician, upon whose vote in legislative bodies depends the success of this service? We should have a democracy that draws to the lawmaking power the experts in every branch of human endeavor, to guide the reform-laws that apply to each of these departments of life, doctors to direct health-affairs, lawyers directing the machine of jurisprudence, engineers and industrial experts for matters of transportation and factory, labor-leaders for things that touch the life of workers, and farmers for the agricultural interests. The growth of the Nonpartisan League, for example, is an expression of protest against political democracy, and the farmers are demanding an industrial democracy wherein the representatives sent to lawmaking bodies will really represent their constituents.

Now, in health-service, but few public health servants are publicly paid, as most doctors in such service still must make a living in private practice. Everything that is done is antagonistic to the economic interests of doctors, as a class of workers. We need the vision to make a radical change in the entire system. It would be no more radical, however, than many or all of the things the League of Nations is going to do; it would not be as radical as the recent settlement of the liquor-question. The present system has been patched up long enough.

QUESTION: What would your proposed system of medical service do about birth-control, marriage, divorce, and all that vital field growing out of nature's urge for procreation?

DR. BLANCHARD: Medicine, as a progressive science, is fairly well rationalized. The problems of the sex-relation are social, economic, and health-questions, and must be separated from religious or church connection and authority. The present marriage-and divorce-system is a disgrace to our present civilization, faulty even as that civilization is. One out of every five marriages ends in divorce, and physicians can tell you that three more of these five would end in divorce, if there were no restraints, such as religious scruples, property interests or the welfare of the children. Physicians can tell you that not one divorce in a hundred is granted for the real cause that seemed to make it desirable; that cause being, sexual discontent and incompatibility, coupled

with economic dependence on the part of the woman.

A real health-service would change marriage-laws so that the unfit would eventually be eliminated and that applied eugenics would direct the relation, to the end that children might be well born, well cared for, and trained for good citizenship. Now, children come into the world haphazard. We expect that like will attract like; that the luckily good specimens will mate with equally good types, and we leave the scrubs to mate with the scrubs, and to produce scrubs. We breed cattle and hogs with great care to the principles of animal eugenics; but, the human animal still is running at large, the victim of lust-perversion, venereal disease, and hereditary taint. We patiently build prisons and asylums for the results of this system of savagery; we employ psychologists to classify the defectives and we struggle to correct their heredity by special schools and methods of treatment, with no thought to removing the cause.

Public medical service would direct its attention to the cause, and presently there would be no need for the present palliative institutions. Whether you accept the theory of Malthus or not, you can easily realize how a time might come when we could not afford to waste food and room upon the unfit. Indeed, it seems, as I have said, as though the ghost of Malthus were after us, right now.

QUESTION: "Would people consent to the authority of such a health-service, that seemed to meddle with their most private and personal concerns?"

DR. BLANCHARD: It is fortunate—or unfortunate—that the race does not progress in its evolutionary development in a straight line. Some are away in the advance, while others lag behind; and the zig-zag of this line explains many of the human convulsions, such as wars, revolutions, and social upheavals. In even a political democracy, we have, fortunately, some social authority. We can prevent the sale of lottery-tickets, counterfeiting of money, and many of our legal regulations constitute a direct interference with what some like to call "personal liberty." The good of the whole, and which Maeterlinck calls "the spirit of the hive," must be the final arbiter. Before this final judge, all health and social things must stand in judgment. At first, force, no doubt, would have to be employed. All that makes the period of transition. At last, results would so fully justify the rightness and the justice of these methods, that not a voice would be raised in protest. The time has come to apply this social force to health-concerns. To eliminate the quackery, the nostrum-makers, the charlatans, the pseudo cults, and the commercially spurious efforts for motives of profit.

QUESTION: "How would such a health-service manage the question of prostitution and venereal disease?"

DR. BLANCHARD: Our discussion has already drawn out to such a length that I

can not, at this time, go into these important subjects. Briefly, the coming of women into full political rights will at once demand anent prostitution the same prohibition as had been demanded anent the liquor-traffic. It will be prohibited, that is all. It will not be managed or palliated. There is no place in our social life for commercialized sex-traffic.

The matter of venereal disease is a biologic battle with certain forms of infection. Aside from methods of prevention and isolation, we must employ drastic quarantine. The feeble efforts of our present health-

authorities will seem very mild when compared with what will be required to eradicate the pest of venereal disease from the near-future generations; but, this evil can be, and will be, eliminated from our health-concerns. Difficult as many details will be and troublesome as the cure is now for venereal diseases, never fear that a real socialized medical service will not solve them all just as we have solved equally difficult things already. Nearly every success that we have accomplished has been the work of publicly paid workers. I am pleading for a full chance for medicine to do its best.

After Thirty Years—XIII

Notes and Reflections on Life and Work

By WILLIAM RITTENHOUSE, M. D., Chicago, Illinois

[Continued from April issue, page 260]

Criticism

A N unexpected result of this series of notes and reflections has been the large number of letters that have come to me from the readers of CLINICAL MEDICINE. And they have not all been complimentary. There have been both "boosts" and "knocks". The former are helpful, because we all like appreciation and encouragement. The latter are useful, too—they tend to keep one humble. I agree with David Harum, that a certain number of fleas are good for a dog. The criticisms have mostly been constructive and sincere. Even the few that have been abusive have their value—they afford material for the study of human nature. Minds of a certain type seem to think that an argument is more convincing if it is well seasoned with personalities and abuse.

These letters from readers afford me more pleasure than does the writing of the articles itself. I look forward to them each month with pleasant anticipation. I am learning from them. Sometimes they present a new point of view. Sometimes they inquire after further information. Often they prove to me that I have failed to express some thought clearly.

Some philosopher has said that our enemies are more likely to tell us the truth about ourselves than are our friends and that even the harshest criticism contains at least a grain of truth, however deeply it may be buried under a mass of abuse. Possibly this may not always be true;

still, as a general proposition, it contains much truth; and a man must, indeed, be wrapped in self-conceit if he does not frankly ask himself regarding every criticism. "Am I guilty or not guilty?" It gives me pleasure to be able to say that a very large majority of these letters express either appreciation, inquiry, suggestion or friendly criticism. I am always glad to learn that a suggestion of mine has been helpful to some reader, and the pleasure is supplemented by the thought that I have an unseen audience (if I may use that word) who are ready to be helpful in turn.

My reference in the March issue, to the use of correct English has brought me a number of letters, most of which express approval, while a few are frankly critical of my position in regard to the use of "none", "prone", and "lay", especially the first one.

Craving the editor's indulgence, I will try to make my position clear. I am simply insisting that "none" is both singular and plural, and that, when it is plainly plural, it should have a plural verb. It is a very common thing to find in the newspapers such a sentence as this: "The passengers were badly bruised, but none was killed". Now, in my ear, that jars as harshly upon my grammatical nerve as to hear someone say: "They was good boys". It is an accepted rule of grammar, that a pronoun should agree with its antecedent in gender, person, and number. In the sentence quoted above, "passengers" is the

antecedent of "none", and, being plural, makes "none" plural. These writers assume that "none" is always singular; however, one needs only to examine our great authors, from Shakespeare down to the present, to find that they use "none" in the plural far more frequently than in the singular. Here are a few quotations taken at random:

None of these things move me.—St. Paul.
(King James' version of the Bible.)

None are for me.—Shakespeare.

None deny there is a God.—Bacon.

None are seen to do it.—Milton.

None are so desolate.—Byron.

None think the great unhappy but the great.—Young.

'Tis with our judgment as our watches,
none go just alike, yet, each believes his own.—Pope.

Few die and none resign.—Thomas Jefferson.

None linger now upon the plain save
those who will not fight again.—Walter Scott.

I am monarch of all I survey, my right
there is none to dispute.—Cowper.

It will be observed that of these ten quotations only the last uses "none" in the singular. I had to search a long time for it, while the plural use is as plentiful as are blackberries in August.

Some modern writers claim that "none" is identical with "no one". But, this is an error, as may readily be seen by trying to substitute "no one" for "none" in the quotations cited. The one from Cowper is the only one that would bear the substitution.

It is instructive to study such questions and answers as the following: "Did you bring my letters from the post-office?" "No, there were none." "Did you order coal?" "No there was none to be had." In the first answer, "none" means "no letters" (plural). In the second, "none" means "no coal" (singular). Instead of "none" being a mere combination of "no one", it is the old Saxon "nan", which was used both in the singular and the plural.

As to "prone", I need only to remind the reader that the word is derived from the Latin *pro*, forward, and means "lying face downward". Its antonym "supine", of course, means "lying face upward", and is the word that careless writers mean when they say, "prone on his back"—which is

a contradiction in terms. There is one exception. Some very good writers use the word "prone" in the sense of "prostrate", when speaking of an inanimate object having no face, such as a tree or a column.

To write "lay" when "lie" is meant, is simply crass ignorance, as, "beyond the hill lays the town". Here is a memory-help that I learned at school in distinguishing the transitive verbs "lay", "raise", and "set" from the intransitive "lie", "rise" and "sit": "We *lay* a thing down, *raise* it up, and *set* it in its place. We *lie* abed when we are sick, but, *rise* as soon as we are able to *sit* up."

A good deal of confusion exists in the minds of many people as to what a rule of grammar really is. They imagine that it is the fiat of a grammarian, who makes the rules just as congress makes a law. The exact opposite is true. The grammarian does not make the rules, he discovers them. Language is a growth. It grows according to certain laws or rules that are a part of its very nature. The grammarian simply discovers those rules and expresses them. The standard of right and wrong in language is usage—the usage of those writers that have written so well that their work endures throughout all generations. The English language is the richest and most flexible instrument of expression that the world has developed, and it is well worth while to try to preserve its purity by resisting the tendency toward corruption, a tendency that confronts every language.

Faith in Medicine

By the above title, I do not mean, confidence in medicine as a science, neither do I mean, belief in the efficacy of drugs, nor, yet, the exercise of religious faith in conjunction with other remedial agencies. All three of these are good to a certain extent, and each could constitute a proper subject of discussion. The kind of faith that I have in mind as the subject of this discourse is, that blind belief in unproven theories and alleged facts that is such an obstacle to progress. I am attacking a bad habit of the human mind, the habit of believing without proof, of believing where we ought to suspend judgment and wait for further information.

Faith has no place in science. I am pleading for an intelligent skepticism. The skeptic has, for a long time, had a bad name; yet, the fact remains that he has

done more for the advancement of truth (which means the advancement of human welfare) than has the too ready believer.

No greater service can be done to the cause of truth than to apply every possible test to an alleged fact. A new proposition may look so plausible, so promising, so attractive that we uncautiously believe and adopt it, instead of suspending judgment, and mercilessly applying to it every test necessary to determine its truth or untruth. It is this tendency to blind belief, the setting of dogma above evidence that is responsible for the socalled "schools" of medicine, the numerous "pathies" and "isms", besides for the rich harvest that the quacks gather from a gullible public. Any proposition the truth of which can not be demonstrated so clearly as to be convincing to the great majority of scientific men should be looked upon with a certain degree of suspicion.

This habit of believing without having evidence is borrowed from religion. I am not criticizing religion nor am I engaging in any religious controversy; I make this reference merely to illustrate my point. It is a generally conceded fact that religious beliefs depend upon faith in matters that are outside the domain of scientific proof. History shows that many times the world has been deluged in blood, because one set of individuals believed one thing and another set believed the opposite. The race has been so schooled in the habit of believing what they are told in religion that it seems perfectly natural to people to do likewise in polities and in medicine.

A curious fact about the matter is, that the more unreasonable a proposition is, the more strongly it appeals to a certain class of minds. For example, of all the pseudosciences that have sprung up around the problem of human suffering, the one that has captured the largest number of supposedly intelligent people is precisely the one that makes the most extravagant demands upon the credulity of its votaries, asking them to believe that pain is a delusion and that sickness is merely error. One would suppose that simply to state such a proposition would be enough to have it laughed out of court. But, no! the love of the marvelous has such a hold upon the human imagination that, when it is brought into conflict with reason, the latter is beaten before the battle begins. Argument is ignored; evidence is not even considered.

The bigot "believes" a thing—and that is enough for him; the matter is settled.

When we attempt to reason with this state of mind, soon we are brought to realize how thin is the veneer that we call civilization and how little the thing that we call education has changed the mental processes of mankind since our ancestors dwelt in caves and worshipped idols of stone and clay.

Only a minority of the race, even in civilized lands, form their judgments upon evidence and reason: the great majority adopt a faith—it is so much easier. To weigh evidence and reason about it, is too much trouble; to have a faith is so comfortable to human indolence.

It is unfortunate that the word "faith" has been applied to two very different things; for, it has resulted in confusion in the minds of the masses. Let me make my meaning clear by an illustration. A man believes that, in the days of Noah, a flood covered the whole earth. That is one kind of faith. Another man believes that "righteousness exalteth a nation". That is another kind of faith. The former is comparatively an unimportant belief, while the latter is exceedingly important, because it has an influence upon conduct and moral character. Now, we constantly find people confusing the two and concluding that the latter, which ought to be called the appreciation of spiritual and moral truth or breadth of vision, is no more important than the former.

So in medicine and in politics, we find people trying to settle their problems of faith. They believe in some particular school of medicine, and, once having fixed their faith, they consider the question closed. They can not see that scientific problems should be decided by evidence, and not by faith. Most people believe in their favorite political party, because they were brought up in it. They seldom are influenced in the matter by facts and reason. What their party teaches they feel bound to accept upon faith. This is the greatest obstacle in the way of political progress.

In medicine, this tendency to put faith above facts is not limited to the laity nor to the irregulars. Observe how often we see new theories or methods of treatment exploited by men that are making this a means of gaining a little fame or, shall I say, notoriety. These fads come, make a

brief sensation, and are relegated to the junk-pile. It would be interesting to make a list of all the wonderful (?) things that have been relegated to the scrap heap within twenty-five years. Of course, in naming each of them, we should be stepping upon somebody's toes, so, I will let each reader compile this list from his own memory.

And, what is the remedy? How can we bring about a better state of things? Mainly, by the slow process of evolution by education. We all can do our little share

in bringing about a better conception of what education really means. The world needs continually to be reminded that the word "education" is derived from a root meaning "I lead out", and, not from one meaning "I stuff in". When it is universally understood that the object of education is, to bring out and train our powers, then we may hope that faith will no longer take the place of reason and research.

2920 Warren Ave.

[To be continued.]

Local and Combined Anesthesia for Cesarean Section

By F. H. McMECHAN, A. M., M. D., Avon Lake, Ohio

Editor of the "Quarterly Supplement" and "American Yearbook of Anesthesia and Analgesia."

SPEAKING before the thirty-first annual meeting of the America Association of Obstetricians and Gynecologists, William Mortimer Brown, of Rochester, New York, (*Amer. Jour. Obstet.*, vol. lxxviii, No. 6, 1918), said:

"At times, there arises in a given case a combination of complications that leaves us but small choice of procedure in order to achieve a successful result. That we have been slow to recognize this situation, is borne into my mind when I recall how, only a few years ago, I watched one of our foremost teachers in obstetrics do a cesarean section in the case of a woman with a contracted pelvis, and then, a few days later, saw him put a patient, who had a dilated heart, on the same table and attempt a manual dilatation under a general anesthetic. The woman died, undelivered, after twenty-minutes' manipulation. We are in a position now to say that, in certain types of cases, abdominal delivery, under use of a local anesthetic, offers the safest means of terminating pregnancy and that this method is entitled to a definite and permanent place in our records of progress."

Brown considers that, in a general way, the patients in whom this procedure is indicated are those in whom, by reason of some intercurrent disease, a general anesthetic is contraindicated and for whom a

difficult labor is unsafe. Such cases are:

1. Patients with advanced cardiac disease, in whom there is actual or impending muscular relaxation. These cases, if there is actual or fair compensation, will often go, under careful hygiene, to the final weeks of pregnancy; but, these subjects are in no condition to undergo even the shortest labor, nor is the relaxation of a general anesthetic safe. The child is viable and active; the mother, if relieved of the strain of her pregnancy, has a prospect of fair health for some time. Such patients are entitled to abdominal delivery under local anesthesia.

2. Patients suffering from severe toxemia, hepatic and renal insufficiency, and impending eclampsia. For some time, abdominal hysterotomy has been growing in favor among many obstetricians, and Brown, with no intention of discussing the merits or demerits of this operation for the relief of profound toxemia, considers that there come to hand occasional cases in which this form of delivery is positively indicated, and that, for the same reasons, local instead of general anesthesia should be preferred.

3. A third complication that may render abdominal delivery under local anesthesia desirable is, according to Brown, pulmonary tuberculosis.

J. Clarence Webster, of Chicago, (*Amer. Jour. Surg.: Anest. Sup.*, Oct., 1918) and H. H. Trout, of Roanoke, Virginia (*Surg.*,

*This is one of a series of editorial résumés of the possibilities of procaine-anesthesia in surgery and the specialties, as collated from the latest current literature upon the subject.

Gynecol. & Obstetr., July, 1918), also have paid especial attention to the development of local and combined anesthesia for cesarean section. During nineteen years of clinical service in the Presbyterian Hospital, Webster has given special attention to the use of anesthetics in pelvic and abdominal surgery and obstetrics. He always deplored the indiscriminate use of ether and was among the first to use Schleich's infiltration-method for minor and major surgery in the aged, and in renal, pulmonary, and cardiac diseases, marked anemia, and chronic wasting diseases and sepsis. Since then, he has abandoned Schleich's solution in favor of procaine and, since 1909, has performed all his cesarean sections, under local anesthesia, whenever general anesthesia seemed contraindicated; and more recently has done many cesarean sections under combined procaine local anesthesia and nitrous-oxide and oxygen narcosis. In 1913, Webster advocated the use of methylene-blue, to color the infiltrating solution and to delimit, for the operator's guidance, the extent of the area infiltrated. In this way, the operator need not insert knife, scissors or needles into unobtunded tissues.

Sensitiveness of the Abdomen and Its Contents

Webster, Trout, and Brown have verified the researches of the late Lennander, of Upsala, regarding the sensitiveness of the abdomen and its contents. Curious to note, Lennander does not mention the sensibility of the uterus, either in the pregnant or the nonpregnant condition, further than to say:

"All organs receiving their nerve supply only from the sympathetic nerve and from the vagus, below the branching off of the recurrent nerve, have no sensation. According to my observation, therefore, the abdominal and pelvic viscera are devoid of nerves to convey the sense of pain, pressure, heat or cold."

Webster has found the abdominal wall sensitive in its entire extent. Also the parietal peritoneum is everywhere particularly sensitive, whether it be pulled, sutured, cut or pinched. Separation of adhesions between any structure and the parietes causes pain, unless the adhesions are very slight. The visceral peritoneum is, in general, insensitive. Separation of adhesions between viscera or between them and new-growths causes no pain, unless traction is

made upon ligaments or mesenteries. Ligation, division or cauterization of the omentum is not noticed by the patient. If it is forcibly pulled down, distress is caused. Similarly, the intestines are insensitive, but, if they are handled so that their mesenteries are stretched, pain is caused. Removal of the vermiform appendix causes no distress, except when adhesions between it and the parietes are separated or its mesentery is stretched. Compression, ligation or division of the broad ligament causes pain.

Incision, suturing or cauterization of the uterus as a rule is not noticed, however, the patient complains of nausea and distress when too much traction is exerted and the ligaments of the uterus are stretched. This assertion is supported by the fact that Trout found, in his eighteen cases under purely local anesthesia, that the most painful part of the performance of cesarean section was, the lifting of the uterus out of the abdominal cavity.

Webster has further observed that, when the adnexa are adherent to the pelvic wall, separation causes distress, while gentle manipulation ordinarily is unnoticed. When an ovary is squeezed, cut or sutured, distress is felt. Separation of the bladder from the uterus produces little or no discomfort; but, division of the wall of the vagina in a hysterectomy causes pain. Sponging of the visceral peritoneum is painless, whereas the same procedure, applied to the parietal, causes distress and pain, varying with the degree of force employed. The pain caused by the removal of a gauze pack from the abdomen results, probably, either from irritation of the parietal peritoneum or from traction upon some part of the mesentery. Slow injection of hot physiologic salt solution (105° to 108° F.) is not distressful, unless the abdomen is unduly distended.

Pain felt within the abdominal cavity, whether in disease or during operation, has to do with the parts innervated by the intercostal, lumbar, and sacral nerves.

The Anesthetic and Operative Technic

Trout precedes operation with a hypodermic injection of morphine ($\frac{1}{8}$ grain) and uses a 0.5- or 1-percent solution of procaine, preferably without adrenalin. Trout has injected up to 250 mils (Cc.) of this solution without resulting untoward effects. The skin is infiltrated in the usual manner, by forming one wheal after another. Web-

ster obviates the initial distress of the needle-prick by first producing nitrous-oxide-and-oxygen analgesia. He advises this combination also because it generally is advisable to make a large incision in the abdominal wall, in order to expose the separated recti-abdominis muscles, for the purpose of making a satisfactory closure of the wall at the end of the operation. Trout considers the preferable incision one, the middle of which is at the umbilicus and the upper end at the level of the fundus of the pregnant uterus.

The fascia is infiltrated in exactly the same manner as the skin. The muscles generally are thin and their fibers part without trouble. A small opening then is made in the peritoneum and the index-finger of the left hand inserted, and the peritoneum is infiltrated, keeping the finger on the inside as a guide for the needle, while injecting this very thin membrane. This part of the procedure is easier than is commonly supposed; however, Webster insists that the thorough infiltration of the parietal peritoneum at the site of incision must be accomplished.

A self-retaining retractor is then placed in the abdominal incision, which is stretched as widely as may be necessary. In this way, the anterior wall of the uterus is exposed. If the patient is nervous and strains at all, so as to force omentum or intestines down from above, Webster advises the introduction of a long strip of gauze, soaked in warm salt-solution, between the abdominal wall and the upper part of the uterus, after the latter has been carefully lifted out of the abdominal cavity. It is important, as Trout suggests, to have the upper part of the abdominal incision so placed as to be slightly higher than the fundus of the pregnant uterus, as in this way that organ can be allowed to ride out of the peritoneal cavity, thus obviating the only distressing part of the operation. If the incision is not made too long, the abdominal wall will hug the uterus and serve to retain the omentum and intestines without the need of using a gauze pack or sponges.

Next, Webster advocates the injection of two ampulesful of pituitrin into the wall of the uterus. When blanching and hardening of the wall begins to be well established, a vertical incision of about 5 inches in length is made into the upper part of the anterior uterine wall, as near the midline as possible.

It is not necessary to infiltrate the uterine wall with the procaine-solution, since incision of the body of the uterus causes no pain. The incision is carried down to the amnion, which immediately bulges through the opening. At this stage of the operation, Brown fastens the uterine wound-edge to the abdominal incision with four or five ordinary towel-clamps, not only in order to fix the uterus in position, but, also, to prevent the blood and amniotic fluid from entering the peritoneal cavity. In addition, an assistant may be instructed to press the abdominal wall against the uterus and to maintain a steady pressure during the emptying of the organ.

As a matter of precaution and to save time, after incision of the uterus, Trout places a line of interlocking sutures of chromic catgut on each side of the fundus of the uterus. These lines are about an inch apart and placed in the long axis of the uterus, thus controlling all bleeding. These sutures go through the whole muscular wall, and the assistant on either side makes traction upon each side on the entire line, thus lifting the uterus up, steadyng it, and controlling hemorrhage. The use of pituitrin obviates the necessity for making these interlocking sutures.

Now the amion is opened, a hand is introduced, to grasp the breech of the fetus, and the latter is extracted and given to an assistant, after division of the cord. The extraction of the fetus sometimes causes the mother distress, when undue force has to be exercised in turning or delivering. In such instances, the concomitant resort to nitrous-oxide-and-oxygen anesthesia gives relief. The uterus now rapidly retracts and frequently the placenta is partly expelled through the incision; the hand is reintroduced, to peel it and the membranes from the greatly reduced area of the uterine wall.

If the cervix be undilated, as many times occurs in primipares, it may be opened by means of dilators passed through the uterine incision, thereby providing drainage from the uterus.

Closing Up the Incisions

The intestines should now be carefully covered with saline packs and the uterine incision closed. Trout approximates the incision by tying the interlocking sutures across the line of the incision, supplemented by a continuous suture of plain catgut, approximating the peritoneal surfaces, so as to leave no spots for future adhesions.

Webster apposes the broad surfaces of the incision by means of several layers of continuous iodized catgut. Through-and-through strong, braided-silk sutures, made noncapillary by rubber infiltration, are passed through the skin, anterior sheath-layers and recti muscles. The anterior sheath-layers are approximated with iodized catgut, the skin edges brought together with fine silk or linen, and the large silk splint-suture tied last.

As a rule, Webster has found that the initial procaine infiltration of the abdominal wall endures long enough to permit the suturing of the incision, without causing pain or further need of obtunding. If there is anxiety or any slight distress at this stage of the operation, Webster induces nitrous-oxide-and-oxygen analgesia, so as to quiet the patient.

Effects of Local and Combined Anesthesia

In the majority of cases, babies, delivered by cesarean section under local or combined

anesthesia, breathe very soon after extraction, except when the mother is eclamptic, toxemic or septic, or when there is some obstetrical or organic complication embarrassing the initiation of respiration. Premature babies or those with defective hearts may be stillborn. There always is the possibility of resuscitation by artificial respiration by means of the various methods, or oxygen perfusion should be tried.

There can be no doubt, concludes Webster, that, as regards the *fetus in the uterus*, cesarean section under local anesthesia causes the least disturbance and that nitrous-oxide-and-oxygen analgesia in combination with local anesthesia, detracts little from its safety and may add considerably to the comfort of the mother. After delivery and before tying the cord, it is quite possible to oxygenate the child through the maternal circulation, reestablishing the analgesia after the cord has ceased pulsating.

Facts and Fallacies Concerning Cancer

By G. BETTON MASSEY, M. D., Philadelphia, Pennsylvania

THE prevailing impression about cancer among those not especially interested is closely associated with the idea of incurability, an idea based but too often upon casual experiences that make such an association highly logical. For, even in the medical profession, the crowded undergraduate curriculum has presented all too little opportunity in the past to impress upon us the *true key to successful treatment; namely: that malignant growths, more than other diseases, present a certain time-limit in their life-history during which they often are highly curable, but, beyond which time-limit treatment is deplorably different in results*. The recognition of this time-limit, therefore, is exceedingly important. For reasons to be mentioned shortly, it will be seen that the diagnosis of cancerous growths during this time-limit of high curability demands, in many cases, the cooperation of the patient, and that, until certain popular errors concerning cancer are corrected, we can not hope for effective co-operation and a betterment of results.

To emphasize the importance of this time-limit of high curability, I may refer to the

results in about 300 cases, reported several years ago to the Philadelphia County Medical Society, in which permanent eradication followed efficient local destructive methods in about 93 percent of 100 cases treated during this time-limit, while only 20 percent were effectively treated in the other 200 cases seen after this time-limit had been allowed to pass. The experience of others employing the same or similar methods is fully corroborative, while it is well known that excision, even, often is effective when done sufficiently early.

The life-history of a cancerous growth consists of three periods:

First Period

This is the period of local self-containment, when the cell-infective process is strictly confined to the original site of appearance or its immediate vicinity, the dissemination beyond the organ or part of organ first attacked being yet by continuity of tissue only, and not by distant colonization. The length of this period varies with the type of the particular growth (and, possibly, the resisting-power of the host), being as short as a few weeks in certain

highly malignant, fulminant types of carcinoma of the breast; lasting, possibly, a few months in less malignant types both of carcinoma and sarcoma; and lasting, possibly, for years in certain skin-cancers.

During this first period, a cancer resembles in almost all respects a benign growth, being neither tender, painful, ulcerated nor hemorrhagic. Since the general public invariably believes that nothing is cancerous unless it presents these symptoms, it can readily be seen that relief is not likely to be sought during this period of the life-history of a cancer-growth.

What are the presumptive signs of cancer in this part of its life-cycle? The answer is, that these negative signs mentioned as associated with a slowly growing tumor are, unfortunately, the most important—unfortunately, in that the very absence of suffering or fear-producing-effect upon the patient is their deadliest feature. To the absence of tenderness, pain, ulceration, and hemorrhage, the expert must add certain evidences gained by the educated touch: hardness; possibly an irregular outline; later, greater fixation than in benign growths. Under no circumstances, must a suspected growth be incised, for a microscopic specimen, in this period; for the certain effect of this procedure means an aggravation of malignancy and the termination of local self-containment. This period corresponds to the time for most favorable results from treatment.

Second Period

The first period in the life-history of a cancer may be self-terminated at any moment by the erosion of a lymphatic vessel by advancing malignancy and the entrance of a minute graft, to be transported by the lymph current to the nearest lymphatic gland, there to form a daughter tumor of the same character as the mother tumor. Varying periods of time are required, of course, for this daughter tumor to become large enough to be detected by palpation. For a longer time, the infected gland protects the other glands beyond it and the general circulation, thus giving still another opportunity for effective treatment, if both the mother and the daughter tumors are destroyed promptly.

Third Period

The second period terminates when a

graft is washed, through the daughter tumor, into a less accessible lymph-gland and thence into the general circulation, or when a graft enters the venous circulation direct, thence to lodge and grow in any one of the internal blood-straining organs. It is unnecessary to describe the symptoms of this period, save to say that it presents one or all of the signs generally attributed by the people to cancer. To the unfortunate majority of patients, it brings the first realization of their plight.

Need of Popular Information

I know of no more useful expenditure of an endowment-fund for life-extension than the correction of this terrible misconception among the people by a campaign of enlightenment that would place a plainly worded pamphlet into every home. Such a pamphlet should make plain the following points:

1. Cancer is not hereditary.
2. Cancer is not a "constitutional" disease.
3. Cancer is purely local when first acquired, and it has a period in its life-history during which it may at times be completely removed or destroyed, thus curing the patient.
4. During the period of curability, cancer is not tender to the touch nor is it painful, ulcerated or hemorrhagic; yet, at this time, if untreated, it is as dangerous to life as is the most advanced case.
5. A person that has a nontender, non-painful tumor that gradually increases in size week by week or month by month should seek treatment at once.
6. The idea, that only a painful, tender or ulcerated growth can be a cancer, is a most serious error and is responsible for most of the mortality from cancer-victims. These conditions attend cancer only in its later stage. The fact, that an apparently simple and harmless tumor is not sore, ulcerated or painful, is a most serious sign, pointing to cancer itself, although still in a curable stage. Tenderness and early painfulness of a tumorous growth are strong indications that it is not cancerous.
7. There is no evidence that cancer is either contagious or infectious.¹

¹Note: Until adequate help is secured for the suggested educational campaign the writer will be glad to forward a few reprints of these remarks to any physician asking for them.

Diagnostic Points on Headaches, Supraorbital Neuralgia, Chronic Otitis Media, and Pain Around the Eyes

By F. A. WIER, M. D., Racine, Wisconsin

TO begin with, most of these socalled neuralgias and headaches are merely the external manifestations of some deep-seated condition, which must be removed in order to cure the trouble. You may remember that, a few years ago, it was the common practice to make an incision over the supraorbital notch, expose the nerve and stretch it, thus expecting to cure supraorbital neuralgia. You also may remember that this operation did not prove satisfactory and came into disrepute, simply because it aimed at the symptoms instead of at the cause.

Now study the problem of supraorbital neuralgia. The symptoms all point to congestion. The eyelids are swollen, there is pain and fulness over the eyes, pain back of the eyes, and attacks of terrific periodical headache, which incapacitates the patient for two or three days. The victim tries the whole coterie of "healers", without getting the slightest relief. Only an occasional hypodermic of morphine stops his suffering.

Now, what is this thing that baffles all of the healers? Look into the nose and see. There you will find a greatly enlarged middle turbinal, which may or may not shrink upon the application of a solution of cocaine and adrenalin, depending upon whether or not the condition is acute or chronic. The turbinate may be tightly wedged against the septum, the lateral wall, or both, if very large. Well, what harm does this do? And, how does it explain the headache?

You have read that, nowadays, in good medical society, they are not removing turbinates. I even have read in this journal that it were best to forget that such an operation had ever been performed. True, the author did not mean that exactly, he referred to the lower turbinate; but, he failed to explain. It is true that it was quite the fad at one time to remove the lower turbinate. It isn't being done nowadays, since rhinologists have learned to

place the blame where it belongs—on the middle turbinate.

Look up your anatomy, and you will find that there are three turbinated bones. Now study the middle turbinal and the nasal accessory sinuses, and you will readily understand why the middle turbinal is so important and why its pathology should be understood by every physician, no matter what his practice or specialty may be. "Some gynecologists think that all headaches are caused by some slight uterine displacement. They have another think coming."

In studying the nasal cavity, we learn that the inferior meatus is that portion of the nasal cavity below the inferior turbinal and contains the nasolachrimal duct at a point about one inch behind the anterior nasal orifice. The middle meatus is that portion of the nasal cavity lying between the middle and the inferior turbinals, into which open the ostium maxillare, the anterior ethmoidal cells and the infundibulum.

The superior meatus is the pathway that extends between the superior and the middle turbinates, into which open the sphenoidal sinus and the posterior ethmoidal cells. It is closed in front and opens only downward and backward. Any obstruction of the drainage of the watery secretion from the nasal accessory sinuses (and which amounts to 500 mils in 24 hours) will cause any or all of the above-mentioned symptoms. The removal of the middle turbinal will open the floodgates confining this sea of trouble. The nasal cavity, the accessory sinuses, and the pharynx are lined with the same mucous membrane. This fact explains the ease with which an infection may extend throughout this entire region. The physician should not regard these conditions lightly. It is about time that the blanket-diagnosis of "just a cold" gave way to something more definite and scientific. Perhaps *infectious rhinopharyngitis* would demand a little more

consideration from both patient and physician.

Chronic Catarrhal Otitis Media, and Deafness

Any obstruction in the nares produces hyperemia and interferes with the drainage of the nasal sinuses; also, the vacuum thus produced further increases the hyperemia. When this condition extends to the post-nasal mucosa, with enlargement of the middle turbinal, we have the exciting cause of chronic otitis media, associated with more or less deafness. And, the common practice of irrigating the external auditory canal is a waste of valuable time. Also, irrigating the nose is just as useless. Swabbing and squirting is old stuff and has no place in up to date practice.

Look into the nose, start at the anterior nasal orifice and go right through to the posterior nasal space. Clean up as you proceed. Deviated septa, enlarged middle and superior turbinates, adenoids, infected tonsils, one or all of these conditions may be causing the trouble.

Bear in mind that the cleanout and cleanup motto applies to the human body as a whole. How many physicians, I wonder, are competent to make a thorough scientific examination of the skin and its contents. Even from the ruby lips to the puckered anus? If they can not, then, why not? Take a postgraduate course and get hep to some of this stuff. It pays big. I know a physician who charges twenty dollars (\$20.00) for an examination, and, he is very, very busy. People are getting wise to the swivel-chair doctors, who merely look at your tongue and write a shotgun prescription, for 50 cents or a dollar.

In which class do you belong? If you find yourself in the 50-cent class, borrow some money, take a postgraduate course, then, if you also find you are living in a 50-cent town, borrow some more money and get out of it. Perhaps you wonder why I say, Borrow money? Perfectly simple. If you are a 50-cent man living in a 50-cent town, it's dollars to doughnuts that you are broke. Am I right or wrong?

Heart-Sounds and Their Value*

By HOBART AMORY HARE, M. D., Lieutenant-Commander,
Medical Corps United States Naval Force

A NUMBER of years ago, I placed the following words on the flyleaf of the seventh edition of my book, "Diagnosis in the Office and at the Bedside": "In the diagnosis of a given disease, it is essential that the physician rest his opinion, not upon one or two symptoms, but, upon a series of symptoms that, when properly put together, give him a complete or nearly complete picture of the malady. It is as futile for a physician to base a diagnosis upon a single symptom as for an architect to attempt to determine the appearance of a house by seeing one of the stones that has been removed from its walls."

I quote these words, because, at the present time, it is of infinite importance to the country as well as to the individual that men really capable shall not be classed as incapable, and, because the opinion of an

examining physician, if in error, may work great harm.

It is not many years since the presence of a murmur in the heart was supposed to indicate cardiac therapy, whereas, we now know that many hearts that greatly need treatment give rise to no murmur at any time, or, in some instances, only when the heart becomes strong enough to make a murmur audible.

There is, in no examination, greater need for putting together all of the symptoms before reaching an opinion than when determining the state of the heart, and I am induced to emphasize this point, because many persons have been rejected for service when in reality perfectly fit for it.

Classification of the Heart-Cases

For the sake of brevity, I take the liberty of separating heart-cases into groups.

First, those in whom a mitral systolic murmur is definite, distinct, constant, and well transmitted, and in whom there is a

*This excellent article, which appeared in *The U. S. Medical Naval Bulletin* for January, is so instructive that it was considered worthy of reproduction in full, rather than merely in abstract.

history of rheumatism more or less remote. These patients undoubtedly have an actual valvular lesion and their good health depends upon adequate compensation, which only is attained by hypertrophy and the utilization of some of their cardiac reserve power. It is hardly necessary to state that such persons should be turned down. They are bad risks for service or life-insurance.

Second, those in whom a definite presystolic purr, or short murmur, is heard inside the nipple-line at about the fourth or fifth rib, accompanied by accentuation of the pulmonary second sound, which murmur is usually made louder by exercise or a fairly full dose of digitalis. If the heart is not tired out, sharp exercise, such as the 100-hop test, usually exaggerates this murmur. When the heart is on the verge of fag, however, sharp exercise may cause this murmur to disappear and the patient becomes dyspneic and distressed. This type also is definitely to be turned down.

Third, those in whom there is a definite murmur, diastolic in time and clearly aortic in origin. The apex beat is distinctly displaced to the left, downward, and the heart is manifestly enlarged. Here, again, there can be no doubt that the man is unfit for service.

Fourth, the individual who has an irritable and rapid heart, with poor development as to the vascular and muscular tissues. All the lines of his body slope sharply from behind forward. The line of the jaw drops sharply, the shoulders droop, the ribs droop, and the knees droop. The figure, as he stands, presents the lines of a cadaver that hangs from hook or chain. The apex beat of his heart is diffuse and there is much apparent thrill to the eye of the observer, but, little or none to the finger-tips. Here is a man that lacks tone in his muscular, vascular, and nervous systems. He can not stand stress of any kind, he sweats while being examined, particularly profusely in the axillary spaces and on the hands. He bleeds readily into his great vessels. In such a case, the heart may be devoid of murmur, of arrhythmia or of any other sign of lesion; but, its sounds lack tone. Such a case, perhaps, should be classed as one of "neurocirculatory asthenia" of Lewis; but, it does not belong to the class called by DaCosta the "irritable heart of soldiers"; since in these persons the cardiac state often is due to great

physical and mental strain, whereas, in the type I have described, it precedes strain and is practically a congenital defect. Such a case is well represented by a youth that entered the cavalry. Placed upon a horse and ordered to charge over a field, in squadron formation, he lasted through the charge, but, fell off, as it ended, in a dead faint. He remained cold and pulseless for some hours. He stated afterward that he had had no sense of fear, but, that it seemed to him as if he could not get his breath and as if all the blood had left his head. Doubtless this was largely true. His neuropathic vascular system did not meet the strain of excitement and effort. These cases are, of course, unfit for service, although a gradual course of neurocirculatory training may greatly improve their value as citizens.

As to Doubtful Cases

At this point, we approach the border of what may be called "the land of doubt"; namely: as to the value of the systolic murmur at the aortic cartilage transmitted up into the carotid artery, because, while it is true that most of these patients should be rejected, many of them are capable of service, and, if examined again, it may be found that the systolic hum may have disappeared. If the man is over 30 or 35 or if there is a history of syphilis or rheumatism at any period in his life, his rejection is necessary, particularly if the palpable vessels are thickened.

It is not necessary, in the types so far discussed, to look for collateral symptoms of cardiac origin, for, up to this point, he that runs may read what should be done.

But, now we come to a very considerable class of cases in which much difference of opinion can conscientiously be adhered to. We are now in the land of doubt, and, just as anyone in doubt looks for all the signs that may guide him well, so is it imperative that he study, not one, but, all the stones that are to form the arch upon which the decision will rest.

Types of the Doubtful Cases

Here, again, we may take up types.

First, the well-built, lithe youth, with no rheumatic history, in whom we discover missed beats or extra systoles, and which irregularities disappear upon his taking the 100-hop test. At times, the disorder of these hearts, when at rest and, particularly, when they are being examined, is very great, but, exercise does not cause dysp-

nea. These hearts are often met with in athletic youths that have begun to lead sedentary lives and who may or may not still be using the amount of tobacco that it may have been their custom to use when leading an outdoor life. Occasionally, a short, quick murmur, inconstant, is discoverable, because a valve "does not sit well," to use a machinist's phrase. I have watched cases of this kind for many years after first seeing them, and they do not come to grief by strenuous exercise. Thus, one of them was, for a number of years, a celebrated hockey-player, then became the captain of one of the great university football teams, and for more than a year he has been flying in France, where he has won the Croix de Guerre. He had found that the only thing that ever caused cardiac irregularities was, lack of exercise. This type is a good risk.

When, however, such irregularities occur in men past the fourth decade of life and do not pass away upon exercise or even increase upon exercise, they possess great importance. They may be owing to the excessive use of tobacco; but, if associated with high blood pressure, they usually are grave in nature and deserve very careful study, with particular reference to the effect of exercise, the condition of the blood-vessels, and the condition of the urine. None of these cases, however, should as a rule, be rejected—unless there are evidences of cardiovascular-renal lesions—until they have been examined with the aid of the electrocardiograph or, at least, of the polygraph, since a purely physical test may be given an erroneous value.

Second, the type in which, under stress, there develops a mitral systolic purr. This type was often seen, before the war, in football-players immediately after a hard game, and in oarsmen after a contest. This murmur disappears upon rest. It is "a safety-valve-murmur", owing to relaxation of the mitral ring. This type, other things being equal, is a good risk. The persistence of this murmur for more than an hour or two, particularly if the person be over 30 years of age, raises a question as to the quality of the muscular fibers forming the ring at the base of the mitral leaflets, and indirectly raises a question as to the quality of the entire heart-muscle or its ability to withstand strain.

Third, the type that, under the excitement of a physical test, presents, at a point

about 1 inch to the left of the sternum, at or above the nipple-level, a short flapping or tapping sound, single or double, not transmitted to the nipple nor up or down. It is not a murmur, but, a valve-sound; in one sense, resembling, except that it is not so loud, the valve-sound heard in a motor when climbing a hill a little too steep for the high-speed clutch. I wish to put especial stress upon this sound, as, in my experience, it has no more significance as to the presence of a heart lesion than the twitching of one of the voluntary muscles justifies a diagnosis of chorea. It is sometimes a sign of nervous stress and may pass away while the patient is being examined, exercise may or may not dissipate it; mental quiet often dissipates it. This is a type of cases most frequently turned down, without adequate reason. A dose of 20 grains of bromide a few hours before the next examination, alone or with aconite or digitalis, often will let this man pass another test; but, even if this tapping valvular sound, if heard in the area described, persists, I have never found it to indicate incapacity of the heart for severe effort. This type should not be rejected.

Closely allied to this, is a systolic sound, not a murmur, heard, when a towel is used in auscultating, between the base of the heart and the apex beat. It is met with in nervous persons with a rapid heart action, and it resembles the sound "ching". Often it is heard better upon light rather than upon heavy pressure. I described this sound before the Association of American Physicians some years ago. At times, it is like a friction-sound, with a metallic tone. As a rule, it is inconstant and often is lost when the patient lies down. It has no evil import.

A cardiopulmonary murmur, heard below the left clavicle upon full inspiration or full expiration, is without significance as to the heart, although it may, in some cases, indicate trouble in the lung. Finally, I should like to emphasize two points, one of which has been especially insisted upon by Sir James Mackenzie, who said: "A perfectly sound heart can give rise to murmurs. If the heart is not otherwise impaired, if it is normal in size, normal in rate, and the response to effort is good, ignore the murmur, it makes no difference where you hear it." From what I have already said, it is evident that I do not go as far as this very eminent expert in the

study of the heart; but, his statement is quoted, to emphasize the fact that all unusual heart-sounds are not evil things.

The second point is, to recall that the heart is not an isolated organ, independent of the nervous system and the rest of the vascular system, nor is it like a piece of machinery made of unyielding metal. Its muscle-fibers have play, they vary with every need of the body in that play. Its valves are not rigid, the bases on which these valves rest are not fixed or rigid, and the chordæ tendineæ constantly vary in their tension; so, too, do the musculi-

papillares vary in their form. Last of all, it is as important for health and for service that the vessels shall be elastic and well controlled as that the heart be normal; for, unyielding vessels weary the heart, not only for offering undue resistance, but, by failing in their own contractility to help in the circulation of the blood, as Ludwig and Brunton showed many years ago. Conversely, a vascular system that relaxes unduly when effort is made also exhausts the heart, which works to excess in order to keep the vessels properly supplied with blood.

Notes on Meningitis

With Clinical Report on 5 Cases

By HYMAN I. GOLDSTEIN, M. D., Camden, New Jersey

[Continued from April issue, page 288.]

A Review of the Literature

IREPORT the second case because meningitis is exceedingly rare in young infants. Moses Barron, in a careful review of the literature (*Amer. Jour. Med. Sciences*, Sept., 1918), found only 39 cases reported occurring in infants less than three months old. Of these 39 cases, only 19 were in newborn. The umbilicus is the most important route for such infection, according to La Fetta. Rasch, Koplik, and Aschoff believe that the avenues of infection of the middle-ear, that of the eustachian tube, and of the external auditory canal are most important. Barron concludes that meningitis

(1) in the newborn and in early infancy is a rare disease; (2) that the colon-bacillus occupies, in the early months of infant-life, the important place that the tuberculosis-bacillus holds in the meningitis of later infancy.

Of the 19 cases in newborn, 7 were due to the colon-bacillus, while 6 cases were caused by the staphylococcus and streptococcus. Of all cases of tuberculous meningitis in children, 75 percent occur before the fifth year. The largest number occur during the second year. (*Smith, Ill. Med. Jour.*, 1913, XXIII, p. 299). Holt (*Amer. Jour. Dis. of Children*, 1911, I, p. 26), in a review of 300 cases of meningitis in children up to three years old, found that the tuberculosis-bacillus was responsi-

ble for 70 percent of this series, but, only 1 percent was in infants under three months of age. If epidemic meningitis be excluded, from 55 to 70 percent of all cases of meningitis in infants and young children are tuberculous in origin.

Besides the auditory canal, eustachian tube, and umbilicus, the mouth (by means of fingers or instruments of the accoucheur), spina bifida, and the intestinal tract may be portals of entry of infection in meningitis of newborn. Some infections occur in the bathtub through the water that has become contaminated. Breastfed babies have greater resistance than those artificially fed, probably because of the compensation of the passive immunization by the breast-milk for the active immunization that still is deficient.

Dr. Walter L. Niles, of Bellevue Hospital, New York, recommends that sterile horse-serum or even antimeningococcic serum be given intraspinally, as this may set up a cellular reaction, and may do some good in these otherwise hopeless tuberculous cases.

Simulating Diseases, and the Sympathomatology

Serum-disease is an anaphylactic phenomenon, evidencing the sensitization of the patient's cells to horse-serum. Eosinophilia often is found in this condition, and there also may be a delay in the coagulation-time of the blood. It develops eight or ten days after the first injection of

horse-serum and is manifested by joint pains and urticaria, particularly. Joint pains are a common symptom. It is important not to mistake it for an exacerbation of the infection itself and, so, to give more of the serum. If this mistake is made, the meningitis-symptoms will increase temporarily or, if several days have elapsed since the last injection, there is danger of anaphylactic shock.

Meningococcic Meningitis.—Meningococcic infection is irregular in every symptom, and treacherous relapses may occur or a subacute serous or chronic meningitis may develop. These latter are rare providing the serum be administered early in the case.

Cerebrospinal Meningitis is an infectious disease of the pia mater and arachnoid membrane of the brain and spinal cord. The commoner causes are diplococcus intracellularis, bacillus tuberculosis, pneumococcus, streptococcus pyogenes, staphylococcus pyogenes, and bacillus influenzae. Epidemic cerebrospinal fever, or spotted-fever, is caused by the diplococcus intracellularis meningitidis (Weichselbaum).

Symptomatology of Meningitis

The incubation-period is unknown, but, it is brief. There is a prodromal period consisting of rachialgia, joint pains, lassitude, headache and vomiting, backache, and constipation. The actual attack, as a rule, begins abruptly with a chill, raging headache, and vomiting.

Convulsions are common in children. Backache and pain in the cervical spine are prominent symptoms. Dysphagia, moderate elevation of temperature, photophobia and strabismus, herpes and petechial eruptions may be present. Convulsions are rare in adults. Ptosis is common. Anesthesia of the cornea and conjunctiva occurs in 50 percent of the cases, according to Burville-Holmes (*J. A. M. A.*, 1908, L. 280), giving rise to conjunctivitis. Purpuric spots may appear. Sighing respirations and Cheyne-Stokes breathing not present. Delirium appears in some cases quite early, in others not at all. Motor-irritation symptoms are quite common, such as twitching of single or group muscles, muscular contractions. Tonic spasms of muscles of the extremities may set in and myoedemas. Leukocytosis (polymorphonuclear) usually is present.

The Kernig sign is explained by the irritation of the meninges of the lower por-

tion of the spinal cord and of the nerve-roots that constitute the cauda equina, together with intraventricular pressure. It is, sometimes, also seen in tetanus and typhoid fever. The Brudzinski or "frog-sign" is, when you flex the chin upon the chest with one hand, while you steady the patient with the other, the arms are drawn up and the thighs and legs are flexed. (The patient lying flat on the back.)

The "identical" or "contralateral" reflex is, that the eliciting of Kernig's sign in one lower extremity causes a reflex flexion of the thigh on the opposite side of the body.

The absence of eruptions does not argue against cerebrospinal meningitis, for, according to J. L. Morse, eruptions are far more often absent than present in this disease in childhood. The *tâches cérébrales* are of no importance in the diagnosis of meningitis, as they are present in other conditions in childhood. In some cases, however, this is quite marked.

Diagnosis

Tuberculous Meningitis, according to A. Jacobi, frequently has its origin in tuberculous bronchial lymph-glands and is most common in children between 2 and 7 or 8 years of age. There are, usually, three stages, namely: the stages of cerebral excitement, the transitional stage, and the third, or paralytic, stage.

Choroidal tubercles may be detected in the eye (although rarely), and the MacEwen sign may be present. The MacEwen sign is, a hollow note elicited on percussing over the inferior frontal or parietal bone—an indication of fluid in the ventricle. Leukocytosis more often is absent, or a leukopenia may be present. A leukopenia is consistent with tuberculous meningitis, but, not with other types. There may be tuberculosis elsewhere, as, for instance, in the lungs.

The typical night-crying or hydrocephalic cry occurs in children. The positive ninhydrin reaction of the spinal fluid aids in differentiating this disease from typhoid fever, pneumonia, and digestive disturbances in children.

R. C. Cabot makes the statement that tuberculous meningitis is not an absolutely fatal disease. Perhaps one victim in four or five hundred recovers. "In every case, we can truthfully say to the family that there is hope and that recovery is possible." The cerebrospinal fluid shows a

lymphocytosis, the small lymphocytes being in the majority.

Tapping the muscles with a percussion-hammer often brings out clearly defined swellings at the point of irritation, which lasts for a few seconds and disappears ("myoedemas"); and they are a certain indication of wasting of muscle. They are commonly very marked in tuberculous meningitis, but, may be present in other general conditions.

Cerebration may be normal until near the end. The tongue is very dry, indicating a severe degree of toxemia (except in mouthbreathers).

Meningismus

Meningismus, or "serous" meningitis, may occur in typhoid fever, uremia, pneumonia, and gastrointestinal disturbances associated with acute meningeal irritation and the hyperproduction of cerebrospinal fluid of practically normal composition.

In meningismus, there is stiffness of neck of moderate degree, usually, and without retraction, except in children. Kernig's sign mostly is present, but, not always, and the reflexes are likely to be more active than normal. In meningismus, the cells in cerebrospinal fluid are not very numerous and virtually all are lymphocytes. In tuberculous meningitis, the cell count is not so high as in the other purulent forms of meningitis, and the cells mostly are lymphocytes. But, in children, while sometimes, we do get a high cell count, the mononuclear cells as a rule predominate, although at times polymorphonuclears are in the majority. To decide, one must examine the spinal fluid for tubercle-bacilli, and even animal-inoculations may have to be resorted to.

In the other forms of meningitis, the cerebrospinal fluid is distinctly cloudy and runs freely under increased pressure. Examination shows a high cell count, and polynuclears as well as the mononuclears are increased, the former being in the majority. The Noguchi protein-test is positive. Fehling's solution is reduced by it. Sterile cultures and negative smears may at first be the result of the examinations of the cerebrospinal fluid; however, if persisted in, the organisms may finally be detected. After a week or two, it often is impossible to find microorganisms in the spinal fluid, and the process may become a low-grade inflammation, with a serous exudate and but little cellular reaction. When in

doubt, it always is a good plan to give the antimeningococcic serum.

Be that as it may, any case in which there are delirium, unequal pupils, Kernig's sign, stiff neck, and leukocytosis calls for lumbar puncture. If the cerebrospinal fluid is very cloudy, one rarely finds the meningococcus on staining a smear in cases of true cerebrospinal fever. There may, of course, obtain a strepto- or a staphylococcemia, that is, a septicemia of pyogenic origin with a meningococcal meningitis, and one may, therefore, first find the staphylococcus or streptococcus organism and not until later the meningococci. It is, therefore, a good plan to give the Flexner serum at once. Osteomyelitis, infected tonsils or other foci of infection may exist. Staphylococcus aureus frequently produces osteomyelitis, while secondary, or pyemic, abscesses often follow. However, staphylococcus very rarely localizes on heart-valves and rarely attacks the meninges. The chances of recovery are greater in staphylococcal than in streptococcal acute purulent leptomeningitis, although the prospect of recovery from either is small.

In meningismus of *uremia*, there would be hypertension, hyperpnea, increased urea, creatin and creatinin in the blood, albumin and casts, and the carbon-dioxide combining power of the blood as well as other blood chemical tests may rule out uremia

Typhoid Fever

Headache here is quite severe, but, is not ordinarily occipital and does not last all through the course of the disease. Back-ache and pain along the cervical spine are not prominent symptoms. The splenic enlargement, the rose-spots, typhoid-bacilli in blood-cultures, the Widal reaction, leukopenia, dicrotic pulse, the urochromogen urine test or Ehrlich's diazo-reaction, and the temperature-chart—all these help toward the diagnosis of typhoid fever. The intolerance of light and sound, the marked hyperesthesia, exaggerated reflexes, peevishness and restlessness of meningitis-patients are absent in typhoid fever.

The pulse is slow, also, in proportion to the fever in meningitis, but, is not dicrotic as in typhoid fever. The diazo-reaction (urine) in any disease is a bad prognostic sign; its absence in a febrile case argues against typhoid fever.

Meningo-Myelitis

Is the commonest form that syphilis takes in the central nervous system; and,

therefore, this condition, when more or less acute, must be ruled out. This is also a surface infection of the spinal cord and brain—the original infection occurring in the membrane covering the nerve-tissue and the arachnoid pia.

The Wassermann spinal-fluid and blood tests, the history of the case, and the therapeutic test are measures that help to differentiate this condition, with the study of the cerebrospinal fluid, and bacteriological and cytological results. "Xanthochromia and massive coagulation" or the "syndrome of Froin" would be absent. It is not present, usually, in the cerebrospinal fluid of acute meningitis cases. It is due to pressure and localized stasis of the fluid along the spinal meninges; there is a great excess of protein and spontaneous coagulation of the cerebrospinal fluid in the test tube, with but slight or no increase of cells; most often it is seen in cases of spinal tumor and inflammations and reactions following injuries of the spine. However, it must be remembered that in all instances of acute inflammation of the meninges the protein is increased (a mixture of globulin and albumin) in the cerebrospinal fluid. The total quantity normally is about 0.02 to 0.03 percent or 0.2 to 0.3 Gram per 1000 mils (Cc.) of spinal fluid.

A decrease in dextrose in the cerebrospinal fluid occurs in the acute meningitides. Normally, there is 0.048 to 0.058 percent or 0.48 to 0.58 Gram per 1000 mils of spinal fluid.

Next to "xanthochromia", the largest amounts of protein are to be found in surface infections of the meninges as the meningitides, due to meningococcus, pneumococcus, streptococcus, tubercle-bacillus, and influenza-bacillus.

In *acute anterior poliomyelitis*, the inflammation is, primarily, an interstitial meningitis rather than a surface infection and, therefore, one does not usually find a large amount of protein in the cerebrospinal fluid. The Pandy and Noguchi or Kaplan tests or the Mayerhofer "permanganate-reduction-index" test may be used for the estimation of the protein content.

Malaria

The enlarged spleen, the history of

chills, the malarial plasmodium in the blood, and the leukopenia would suggest malaria. Softening and enlargement of the spleen generally indicate, only, that some acute infection is present.

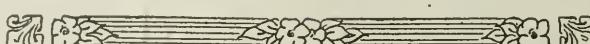
L. F. Barker says that, when a diagnosis is uncertain in the case of a patient having high temperature, a blood-culture always should be made. In the first week of typhoid fever, a blood-culture gives positive results in 90 percent of the cases. The same is true for lobar pneumonia. In a large proportion of pneumonia-cases, you can grow the pneumococcus from the blood inside of twenty or twenty-four hours. In acute meningitis, you may get in a blood-culture the meningococcus—possibly one of the other organisms (such as staphylococci and streptococci), that give rise to the disease—in one-third of the meningitis-cases within twenty-four hours. This point deserves to be especially emphasized; that is to say, the importance of taking blood-cultures early in fever-cases. Bile-bouillon or blood agar may be used as the culture-medium. Blood agar also is a good medium for spinal-fluid culture in suspected cases of meningitis. Barker says that herpes is a very common accompaniment of meningococcal meningitis—more frequently so than in malaria.

In the differential diagnosis of the various forms of meningitis and such diseases as have already been mentioned—namely, malaria, typhoid fever, meningismus, uremia, and meningomyelitis—we must also include acute anterior poliomyelitis, especially the cerebral, or meningeal, form known as Heine-Medin disease; and, lastly, sinus thrombosis.

Sinus Thrombosis

Sinus thrombosis, when extending to the meninges, with high fever and high cell-count, could be ruled out by the absence of dilatation of the cranial or facial veins, with no swelling of eyelids, no cyanosis of orbital or frontal regions, no protrusion of eyeballs, no engorgement of retinal veins, no mastoid signs; no otitis media, and nothing abnormal palpable in the jugulars. Brain abscess and acute encephalitis extending to the meninges also can be ruled out.

[To be continued.]



What Others are Doing

DIAGNOSIS OF INFLUENZA

In a paper on a typical tender spot in influenza, Boeckler, quoted in *Medical Supplement* (London, Dec. 1, '18), draws attention to a sign which in his experience is never absent in true influenza and the absence of which excludes the disease. This tender spot which is usually bilateral but may be present on one side only is found as follows: A horizontal line is drawn two fingers' breadth above the highest points of iliac crests with the patient in the vertical position. The point where this horizontal line intersects the outer border of the longissimus dorsi is the characteristic influenza tender point, which corresponds, according to Boeckler, to the space between the third and fourth lumbar vertebrae. This sign is often the only objective finding present at the beginning of the disease, and sometimes persists after all the other symptoms have disappeared. Boeckler has never found it present in any other disease, and considers that its constant presence in influenza proves that a more or less marked neuritis is constant in this disease, affecting all the branches of lumbar segment, and the fourth most of all. The hypothesis accounts for the pain in the back and legs and also for the giving way of the knees so frequently observed in influenza, as the fourth lumbar nerve sends motor fibres to the inner side of the leg.

SALICIN-THERAPY IN INFLUENZA

In view of the many emphatic objections that are being raised, by some of our correspondents, to the employment of "aspirin" (which is acetyl salicylic acid, that is to say, a derivative of salicylic acid), and also with reference to the experiences recorded by Doctor Rittenhouse (this journal, April, p. 263), who reports most excellent results secured from the use of sodium salicylate in scarlet-fever, a communication to *The British Medical Journal*

(March 8) by Dr. E. B. Turner, of London, is of interest.

Doctor Turner has employed salicin in upward of 2,300 cases of influenza since the first epidemic of 1889, every one of his patients having recovered completely, without ensuing complications and without occurrence of a single death. In his present communication, he presents a table showing the duration of 335 cases of influenza that came under observation in the November and February epidemics, in every case, 20-grain doses of salicin having been administered every hour for twelve hours, and thereafter every two hours for the next twelve hours. The table shows that the earlier the patient can be got fully under the influence of this drug, the shorter was the period of the fever and the more rapid the recovery. In none of the patients was there any complication, recovery being perfect in every instance. The ages of the patients ranged between 7 and 77 years. For children under 16 years of age, the dose of the salicin was reduced so as to make 1 grain for each year per hour; a child of 10, for instance, receiving 10 grains every hour.

In about 30 of the 335 patients, more or less buzzing in the head was complained of, while in 3 a red punctiform rash appeared, and sudamina in a larger number. Both the rash and the buzzing subsided with the omission of the drug. Doctor Turner found that usually those cases that began with a very high fever (103.5° to 105° F.) seemed most amenable to the salicin-treatment and terminated more rapidly than those in which the initial temperature was moderate.

Incidentally, Doctor Turner's observations confirm the view expressed by bacteriologists, that the November and February epidemics were different from that of last summer, the clinical symptoms being more severe and the salicin-treatment giving him not quite as good results. However, "in all epidemics", from that of 1889,

up to and including that of last July, virtually every case treated with salicin in the manner outlined came to an end without complication in forty-eight hours, at the latest. Since last November, the abortion of the disease is not so prompt, symptoms persisting for five, six or seven days. Nevertheless, with the treatment employed, complications were avoided and recovery was rapid without after effects.

THE CAUSES OF COLDS

An unusually satisfying article on the etiology and treatment of colds, by Dr. Oliver T. Osborne, of New Haven, Conn., appeared in the *New York Medical Journal* for March 29. The detailed study of this article is recommended cordially to all practitioners.

Doctor Osborne says, in accordance with present-day views, that probably all so-called colds are due to infection and that they also are contagious. Among the many germs that produce colds, the micrococcus catarrhalis has been definitely identified, while the causative importance of pneumococci and of streptococci is not established so clearly. It is assumed, however, that there are other germs that rapidly spread contagion but which have not yet been discovered.

While Doctor Osborne declares that vaccine injections from mixed bacteria found in the mouth or nose probably rarely prevent colds, and that the general advice given to patients simultaneously with the vaccine treatment and perhaps special nose and throat treatment would tend to prevent their occurrence, we are inclined to disagree, having found in many instances that the sole injection of such vaccines possibly repeated several times, broke up an existing habit of acquiring cold, the treated persons having remained free for long periods of time.

Doctor Osborne wisely warns against underestimating the importance of colds, since these never leave the patients in perfect condition but always necessitate a period of recuperation, while, furthermore, they predispose to repeated attacks. Indeed, a "cold" may be the indirect cause—by creating a predisposition, or, a lessening of resistance—of subsequent follicular tonsillitis, diphtheria, pneumonia, influenza, and also such diseases of children as measles, whooping cough and scarlet

fever. "Colds, especially in young children, should be considered regrettable recurrences and should always be properly treated and never neglected."

THE PREVENTION OF COLDS

In the article cited in the foregoing, Doctor Osborne lays it down as a general rule that adenoids that are in the least obstructive should be completely removed. If enlarged tonsils do not obstruct the throat, they may be tolerated for a time. If, however, one or both tonsils are diseased, having pockets harboring secretions, germs, and perhaps pus, there can be no question of the advisability of immediate and complete removal. Yet, if a few surface pockets can be slit and treated and, thus, healed, tonsillectomy may be avoided.

Incidentally, while it is admitted that too many tonsils are being removed on the mistaken plea that a large tonsil is a bad tonsil—if the patient has recurrent attacks of tonsillitis and, certainly, if he has had one or more attacks of acute rheumatism, the tonsils should be sacrificed immediately.

Nasal hypertrophies or bone blockings of the nostrils should be treated conservatively, minor operations in this region being more satisfactory than major and the more dangerous resection. It is to be kept in mind that the nasal passages should not form a perfectly free open tube, the more or less crooked and narrow passages serving to retain dust and germs, also to warm the air before it enters the more sensitive larynx, trachea and bronchi.

The possibility of focal infection through neglected decaying teeth must be considered and acted upon because, undoubtedly, chronic infection of teeth and gums may be responsible for recurrent colds.

Beside local measures of prevention, it is essential to inhale a proper amount of fresh air, both in the day time and night time. However, the term "proper amount" should be emphasized. Foolish hardship and exposure is to be condemned as much as the avoidance of fresh air, since no person was ever yet hardened by it; no babe was ever yet hardened by sleeping out of doors when the cold is intense or during storms. Drafts blowing from out of doors and electric fans on some parts of the body do not prevent colds, nor is it reasonable to have the windows open as fully in

midwinter as in summer. Indeed, the fresh air treatment, in Doctor Osborne's opinion, is rather overdone, and we are glad to see him go on record that there is absolutely no excuse for the tuberculous patient sleeping so exposed that the snow comes on to his bed or into his face.

The clothing, both of children and adults, should be sensible. Extremes of overclothing as well as underclothing being reprehensible. And, wearing the same underclothing the year around is not a good rule for everybody, no matter how well some individuals may stand it. The skin should always be comfortably warm and normal, especially in cold weather, and insensible perspiration should not be prevented. Overclothing, as well as insufficient clothing, predisposes to cold. In similar manner, the use of cold sponging or of cold showers, if associated with brisk rubbing and exercising, may be of advantage.

Open-air exercise always is useful in increasing the peripheral and muscular circulation and preventing congestion of the internal organs and, hence, colds. In the matter of cold morning baths and much physical exercise, the individual susceptibilities and resources of strength must be taken into consideration. If the circulation is not good, it must be improved by graded treatments, the results being watched carefully. Otherwise, congestion of the upper air passages may predispose to the very colds that it is desired to prevent.

Proper food particularly is an important item in preventing cold. Anything that causes nervous excitation, as tea and coffee, in young children, or too much meat, or a diet that induces constipation, may cause congestion of the mucous membranes and predispose to colds. Highly seasoned foods, rich foods and much meat, alcohol, even smoking, may bring about similar conditions. It has long been recognized that constipation many times seems to produce congestion of the throat and nasal passages.

THE DRUG TREATMENT OF COLD

The stages of a cold are, inflammation of the mucous membrane—first, dryness, with congestion and swelling, followed later on by an outpouring of mucus secretion with increased leukocytes and then

more or less purulent secretion. In the first stage, that of dryness with congestion and swelling, a cold may be aborted. Of primary importance is a brisk cathartic, milk and cereal diet, and a greatly restricted intake of liquids even if the patient is thirsty; though he may sip liquids and take small amounts of lemonade or eat oranges. To further this abortive treatment and stop the congestion of the mucous membrane from becoming greater, and, finally, pouring out large amounts of mucus, 1-500 grain of atropine sulphate should be given to an adult, every two hours, for five doses, and then every three hours for five more doses. A child ten years old could have this dose every three hours for five doses, and then every six hours for five more doses. The throat and mouth may be washed with a mild alkaline wash, as liquor antisepticus alkalimus, diluted with equal part of warm water. This may be used every two hours. Nasal sprays are inadvisable at this stage. Many colds are aborted by this treatment. Hot baths, body baking, and electric light baths, if one has the opportunity to take such treatment, by bringing the blood to the surface of the body and then relieving the congestion in the nose and throat, may aid in aborting a cold. If there is much fever, a dose of antipyrine may be advisable.

If a cold progresses, the congestion of the mucous membrane becoming severe, this will not abate until the secretion of mucus is free; consequently, this should be hastened. The atropine should be stopped, and ammonium chloride may be given, best in syrup of citric acid and water. If there is an irritable cough, codeine may be added to this mixture. If there are apparently influenzal symptoms in the patient, viz., severe backache, headache, and more or less fever, one or two small doses of acetanilid may be given; or acetyl salicylic acid in two or three doses. It is not necessary to continue these drugs more than two days, at the most, perhaps not more than one day. Such a patient must remain in bed for two or three days at least.

If the cough becomes productive and not irritable, the ammonium chloride mixture may be continued, but without the codeine. If the expectoration is profuse, terpine hydrate may be substituted for the ammonium chloride. It should always be given in powder or in capsule, or if a

tablet is given, it should be crushed before swallowing. If the patient has difficulty in raising the mucopurulent secretion from the bronchial tubes, and it is sticky and hard to expectorate, sodium iodide in small doses is the best treatment. After any cold, the patient requires a tonic, such as a capsule of quinine 1.10 Gram, reduced iron 0.05 Gram, and strychnine sulphate 0.0016 Gram, three times a day, after meals. If there has been any congestion of the ears, the quinine should be omitted. Some liquid bitter tonic may be given, if it seems preferable. (Oliver T. Osborne, in *N. Y. Med. Jour.*, March 29.)

THE AMERICAN JOURNAL OF CARE FOR CRIPPLES

The American Journal of Care for Cripples, which is the only special periodical in English on provision for the disabled, becomes a monthly with its January issue, according to announcement by its editor, Douglas C. McMurtrie. Although dealing extensively with the rehabilitation of the invalided soldier, this journal is, in no sense, a war-product, as it is now entering upon its eighth volume.

This periodical will, in the future, contain the studies, translations, and abstracts produced by the research-department of the Red-Cross Institute for Crippled and Disabled Men, which material has hitherto appeared in a special series of publications. The journal also continues as the official organ of the Federation of Associations for Cripples.

WORK OF THE ILLINOIS SOCIAL HYGIENE LEAGUE

With the change of its name to Illinois Social-Hygiene League, the venereal-disease organization formerly known as the Red League, is planning to enter upon a drive against social diseases in Chicago and Illinois, according to its president, Professor Robert H. Gault, of the Northwestern University.

The change of name was voted at a recent meeting of the board of directors and at the same time plans were made to open the new drive with an annual meeting and exhibition of the evil effects of venereal disease and to illustrate the means employed to attack it. This exhibition, to be held in April, was to include, it was said, a public showing of the two gov-

ernmental social-hygiene films titled "Fit to Fight" and "The End of the Road".

Soldiers and sailors recently discharged are being given free treatment for venereal disease at that dispensary of the Illinois Social-Hygiene League, 118 West Grand Avenue, Chicago, according to a plan previously entered into with the State Department of Public Health. Executive Secretary Bernard C. Roloff of the League reported at the meeting that more than 100 new patients are being received at the dispensary every month, of whom one-third are discharged soldiers and sailors, who are treated free and who have been referred for treatment by the American Red Cross and the U. S. Public-Health Service.

Men, women, and children to the number of nearly 1000 have received treatment at the League's dispensary, according to Secretary Roloff, and more than 5000 treatments were given since the dispensary opened in May, 1918. At the present time, 700 treatments are being given each month, many of these gratis. Nine physicians are on the staff, of whom three are women; four women's clinics being held each week.

The new drive began with the sending, by the secretary, of a series of four introductory letters to 6000 employers of labor, and the distribution of framed signs, to be hung up in shops and factories. Adequate treatment, irrespective of the cost, is to be given by the League to all persons suffering from venereal disease, the fees charged to be scaled to meet the financial standing of each respective patient or to be entirely waived when necessary.

The disbursements for the dispensary it is stated, amount to \$1,500 monthly, only one-third of this coming, as fees, from patients, the remainder being made up by contributions solicited by mail. A campaign for funds to support the increased activities of the League was announced. Five hundred dollars a month in new contributions is asked for, besides an additional sum of \$1,000 for necessary equipment and to permit the taking over of increased space to enable the League to continue its free treatment of soldiers and sailors, who otherwise would, in many instances, it was reported, return to their homes in an infectious condition and thus endanger wives and children or other members of their families.

Let's Talk it Over

Studies on Food Economics

Count Rumford's Experiments¹

BEFORE proceeding further with the subject of vegetable food, we will pause to relate the result of Count Rumford's efforts to reclaim the beggars, bums, and thieves that infested the city of Munich. The Count, before he began his experiments at reclaiming these vagabonds, reasoned thus:

"The cause of the failure to cure this evil is, that all previous efforts started at the wrong end of the problem. With persons of this description, efforts to reclaim them by precepts, admonitions, and punishments are of little avail. But, where precepts fail, habits may, sometimes, be successful. To make vicious and abandoned people happy, it has generally been supposed necessary first to make them virtuous. But, why not reverse this order? Why not make them first happy and then virtuous? If happiness and virtue be inseparable, the end will as certainly be obtained by one method as by the other; and, it is most undoubtedly much easier to contribute to the happiness and comfort of persons in a state of poverty and misery than, by admonitions and punishments, to improve their morals."

Acting upon these principles, Rumford, after reorganizing the Bavarian army—not only as regards military discipline, but, in feeding, clothing, education, and useful employment of the men, in order to make them good citizens as well as good soldiers—he proceeded to attack the more difficult problem. Thus, he goes on to say:

"To convince the public that the scheme was feasible, I determined first, by a great

exertion, to carry it into complete execution and then to ask them to support it." He then describes the conditions to be remedied, as follows:

"The number of itinerant beggars of both sexes and all ages, foreigners as well as natives, who strolled about the country in every direction, levying contributions from the industrious inhabitants, stealing and robbing and leading lives of indolence and most shameless debauchery, was quite incredible. These detestable vermin swarmed everywhere, and not only their impudence and clamorous importunity were without bounds, but, they had recourse to the most diabolical acts and most horrid crimes in the prosecution of their infamous trade. Young children were stolen from their parents by these wretches and their eyes put out or their tender limbs broken and distorted, in order, by exposing them thus maimed, to excite pity and the commiseration of the public."

Believing the public would not enter into any systematic plan to abate this evil, he took his measure accordingly. He distributed the army throughout the country districts, with orders to round up and capture all these beggars. On January 1, 1790, he bagged all the beggars of Munich in less than an hour by means of a well-organized civil and military battle. Then, having captured the beggars thus cleverly, he proceeded to carry out the above principles by taking them to a large building already prepared, where "everything was done that could be devised to make them real comfortable."

The first condition of such comfort, he maintained, is cleanliness. He says:

"Most of them had been used to living in the most miserable hovels in the midst of vermin and every kind of filthiness or to sleep in the street and under the hedges half naked and exposed to all the inclem-

¹Our readers will remember that, in one of his earlier articles (Aug., 1918, p. 593) Doctor Cuzner presented some biographical data concerning Count Rumford who, despite his aristocratic name, was born in America, namely, at Woburn, Massachusetts (1753). Further information about this interesting soldier-statesman—savant—economist will be found in Vol. XXXII, p. 849, of the "Encyclopædia Britannica," eleventh edition.—Ed.

encies of the seasons. A large and commodious building was now their home, one fitted up in the neatest and most comfortable manner."

In this agreeable retreat, these beggars found warm apartments kept with the most scrupulous neatness; well warmed in winter and well lighted; a good warm dinner every day, gratis, cooked and served with all possible attention to order and cleanliness; materials and utensils for those that were able to work, teachers gratis for those who required instruction; the most generous pay, in money, for all the labor performed; and the kindest usage from every person, from the highest to the lowest, belonging to the establishment.

Here, in this establishment for the indigent and unfortunate, no ill usage, no harsh language was permitted. During five years, not a blow was given to anyone, not even to a child by his teacher.

This will likely appeal to my readers as a very expensive scheme of a very benevolent utopian; but, it was not so. At first, there was required a large outlay of money, but, at the end of six years, the accounts showed a net profit of 100,000 florins, while the reformed individuals constituted a large percentage:

When will our poorhouse management show as good moral and financial results?

I remember visiting the poorhouse of our county and, being invited by the superintendent, a physician, to take dinner, I sat down to the table; however, when the food was served, my stomach said "No!" although politeness compelled me to eat. The staple food served by Count Rumford was a vegetable soup, to which he also at first added a little meat for flavor, supplemented by some good bread. The food furnished by him did not cost, per individual, one-fifth of that supplied at the poorhouse where I suffered gastronomic martyrdom.

I found, upon consulting the recipe that Rumford selected as the basis of his soup, just that proximate element which we now know to be one of the most nutritious that he could have obtained either from the animal or vegetable kingdoms, namely, casein. He not only selected this, but, he combined it with those other constituents of food which our highest refinements of modern practical chemistry and physiology have proved to be exactly what is

required to supplement the casein and to constitute a complete and palatable dietary. By selecting the cheapest form of casein and the cheapest sources of other constituents, he succeeded in supplying the beggars with good hot dinners every day at the cost of one cent each.

We will now consider some* of these cheap and wholesome foods.

Before doing so, it will be as well to remind the reader that our bodies, at an average weight of 140 pounds, contain 120 pounds of water, and only 20 pounds of dry material. Count Rumford realized this fact, and likewise another, namely, that our food must be made palatable, in order to find acceptance in sufficient quantity to nourish the body. Consequently, he prepared a soup that was palatable, besides being capable of nourishing a hard-working man, and that at a cost of but one cent for each person.

The main ingredients of his soup were pearl-barley and peas, to which he added cuttings of wheaten bread. Below I name the ingredients for his soup (calculated to furnish dinner for 1,200 persons) to which I have ventured to add 10 cans of tomatoes and 10 pounds of Hamburg steak:

RUMFORD'S SOUP	
141 pounds pearl barley	\$ 2.00
131 pounds dried pease	2.00
69 pounds cuttings of bread.....	2.50
12 pounds salt25
46 pounds vinegar	2.25
1,077 pounds water	
	\$10.00
10 pounds Hamburg steak.....	1.00
10 cans tomatoes75
Fuel for cooking.....	.25
Total cost for 1,200 persons.....	\$12.00

Well do I remember crossing the Atlantic ocean in a packet-ship. We were five weeks reaching New York (this was in 1848). The smell of the soup the German emigrants cooked at the galley-fire was most tantalizing. (In those days, emigrants had to carry their own provisions and to cook the same.) If I remember rightly, this German ship-soup was made with smoked sausage, dried beans, noodles, onions, garlic, rye-bread, and condiments. I am not certain but that sauerkraut was likewise one of the ingredients; but, if not, it ought to have been, on account of its healthful properties. [Sauerkraut, i. e., pickled cabbage never is cooked in soup; but, the fresh cabbage is, often; not only

by the Germans but also by the French whose culinary art is justly appreciated.
—Ed.]

Count Rumford's cooking of the ingredients named was conducted as follows: "The water and the pearl-barley were first put together in the boiler and made to boil, the peas were then added, and the boiling continued over a gentle fire for about two hours, then the rest of the ingredients were added and the boiling continued for another two hours, stirring frequently; then the vinegar and salt were added. When cooked, the soup was served with cuttings of bread." (I think a fireless cooker would give better results.) At first, Count Rumford had to superintend the cooking himself, owing to the inveterate kitchen superstition concerning simmering and boiling—the belief that anything boiling rapidly is hotter than when it simmers and, therefore, is cooking more quickly, this impelling the nonscientific cook to shorten the tedious three-hour process by fast boiling. As a matter of fact, this boiling drives the heated water from below, bakes the lower stratum of the soup, and spoils the whole.

The ordinary cook, were she "at the Strappado, or all the racks in the world," would not keep anything barely boiling for three hours, with, to her, no visible result. According to her position and superlative experience, the mess is cooked sufficiently in one-third of the time, as soon as the peas are softened. "She don't and she won't, and she can't and she sha'n't" understand such cooking. "When it's done it's done, and there's an end to it; and what more do you want?" Hence, the failure of many attempts to introduce any advanced processes in cooking. I will make one exception to this, namely, in respect to the fireless cooker. This has seemed to have taken a hold on public favor (though, not so much because it is a better cooking process, but, because it saves much trouble.) After partially cooking the food, one can place it in the fireless cooker and leave it there for many hours.

To revert to our theme. The weight of each portion of the soup and bread served to each person was 19 ounces; the solid matter contained 6 ounces; and Rumford states that this "is quite sufficient to make a good meal for a strong, healthy person, as abundantly proved by long experience." He insists again and again upon the neces-

sity of the three-hours' cooking, and I am equally (if not more so) convinced of its necessity. I am convinced that six-hours' cooking will result in more nutrition than will three-hours' cooking and leave less residue to be excreted. He further states that the bread to be eaten with the soup should not be cooked. There is reason for this, and the reason has been urged by Fletcher, and at the present day it is called Fletcherism.

A. T. CUZNER.
Gilmore, Fla.

LETTERS FROM FRANCE—IX

[Continued from April issue, page 312.]

After a poem by M. Jean Richepin, a tribute to Great Britain, which was recited by the author, Lord Derby, the British Ambassador to France, spoke. He first thanked those who had spoken, especially M. Deschanel, who had presented such a vivid picture of what Great Britain had done, and those who had organized the meeting, and then gave a brief résumé of what the British Navy and Army had accomplished, stating the position of Great Britain at the beginning of the war and the methods taken to make her a great military as well as maritime power. He commented upon the German sneers at the "contemptible little British army", and referred to its then having largely a volunteer army. He concluded by saying that Great Britain had done all in her power to place all its resources into the scales.

He also alluded to the present alliance between America, France, and Great Britain, saying that, at one time or another, these nations had fought each other, and mentioning incidents connected with the American War of Independence, adding that, since America had come into this war, the British loved the Americans probably more than the Americans loved the British, and that all past differences between any of the present Allies had been forgotten.

Lord Derby begged all to remember that the war was not over and that there must be no relaxation of efforts until the menace of Germany had disappeared from this world and until the reparation for the damage done had been exacted and punishment inflicted for illegal acts. He concluded by making an appeal that the alli-

ance of war between Great Britain, France, and America be continued, when final peace comes, as an alliance of peace.

An elaborate tea was served at the buffet in the salon, while the Coldstream Guards played in the garden and prewar days were recalled. Marshal and Mme. Joffre were present, the Marshal receiving cheers whenever his name was mentioned by the speakers.

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Although the number of deaths from influenza in the Paris hospitals still is considerable—being 242 on Monday and 193 on Tuesday, according to the *Temps*—more patients are being discharged as cured than was the experience last week, and the proportion of bad cases is smaller. It still, however, is highly necessary for the public to observe the precautionary measures already prescribed. [This letter was written December 20, 1918.—ED.]

In view of the strain on civilian medical men, the Army has placed the services of 17 doctors at the disposal of the Paris public. They will be stationed at various police-stations and firemen's-barracks, from 10 p. m. to 7 a. m. Should an urgent case of influenza show itself at night, application ^{canal} be made at the nearest police-station for one of these doctors. Motor cars for the removal of patients to hospital and cyclists, to bring medicaments from the pharmacists, also are now provided at the police-stations.

Arrangements have been made to supply quinine and aspirin to pharmacists that still are short of these drugs, but of which the stocks in France are quite sufficient for all requirements.

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Lieutenant Henry E. Wise, of Long Branch, New Jersey, Red Cross man in charge of Franco-American Canteen No. 1, has received a second citation, carrying with it the Croix de Guerre.

Lieutenant Wise's first citation was received only a few weeks ago from the officer commanding the first Battalion of Chasseurs à Pied. His latest citation comes from the First Brigade of Chasseurs Tcheco-Slovaques and reads as follows:

"For the bravery and devotion shown by him during the period of heavy fighting from the 18th to 24th of October, 1918, assuring, under bombardment, the distribution of hot drinks to the wounded and to the

Chasseurs of the Bridge and also for showing the greatest scorn of danger."

—
A report on the amount of work done by the American Fund for the French Wounded during the month of September shows that 1,549 cases were received from America, 1,357 cases and bales were despatched 540,351 surgical dressings and 79,095 hospitals-articles were sent to 270 hospitals. The organization is greatly in need of sheets, square pillow-cases, towels, handkerchiefs, day-shirts and night-shirts. These and all other linen and cotton supplies are practically unattainable in France, hence, they are urgently called for from America.

B. SHERWOOD-DUNN.

Paris, France.

THE PHYSICIAN AND THE SALVATION ARMY

Is the physician a member of the Salvation Army? Doubtless a perusal of the records would reveal many individuals holding such membership; but, there exists, between the Salvation Army and the great collective body of physicians, a close bond of kindred ideals, which warrants the answer to the foregoing question being an emphatic "Yes!"

The physician and the Salvationist serve shoulder to shoulder in every community where the Salvation Army has a corps or even but a "soldier" member. The poor are ever with us, and, who will gainsay that often the hurry-call to the slums, coming late at night, offers even the suggestion of payment for services rendered. Is not that call, in many, many instances, accepted as a labor of love? And, returning home after a desperate fight at the bedside of some battered wreck or half-starved child, does not the warming glow of satisfaction of having been able to aid make less gray the dawn?

As the physician stands ever ready to hear the call of the sick poor, so does the Salvation Army stand equally responsive to the anguished cry that is ever rising from the slums. "Help us, give us food for our spiritual and physical beings" echoes and reechoes from coast to coast.

For more than fifty years, the Salvation Army has waged relentless warfare upon poverty and vice—the menacing aids to disease. Beginning in the slums of Lon-

don, the movement has extended, until it now is firmly established in sixty-one countries. The fight has been a bitter one, and even now it would appear as if the battle had just begun.

Emerging from its work with the troops overseas, the Salvation Army now faces a greater responsibility. Popular almost beyond belief, when one considers the open opposition in its early days, the organization has determined to double its efficiency. Only by making one intensive appeal, can that new program be assured and insured for the coming year. The answer is, the Salvation Army Home Service Fund Campaign for \$13,000,000, that extends through the week of May 19-26.

The Salvation Army goes before the public of the United States confidently, because it has the confidence of the people. There is no question in the mind of the average man as to how its money has been spent in the past. He knows in a general way and rests content. With this tremendous appeal for funds going out, it is well to detail the manner of the spending of the money.

The free clinics of the Salvation Army are known to many physicians. Probably it is not generally known among the profession that the Salvation Army has long since established an institution unique in the annals of human enterprise in the shadow-lands of throbbing kaleidoscopic New York. Its official designation is The Salvation Army Women's Home and Hospital.

Here, each year, a thousand—and oftentimes many more—women are reclaimed from the refuse heap of humanity and sent back into the world. Here the wives of poor men find tender care and expert attention. Here the disillusioned girl with her secret sorrow finds spiritual as well as physical care. Here her baby may come into the world with every advantage that is the portion of the offspring of more fortunate women.

Books—many of them—could be written around the incidents that transpire there daily. Rich in moral and freighted with pathos would they be. At first, the hospital consisted of but one building, and that was heavily mortgaged. In 1909, a campaign for funds resulted in the liquidating of most of the debt, and a second building was purchased. Then came a friend who prefers to remain unnamed. His gifts

totaled nearly \$120,000, and a third building was added. The buildings were reconstructed, and the result is, a splendidly equipped hospital, two operating-rooms that afford every surgical convenience and necessary appliance. As a factor in the regeneration of broken womanhood, it is not to be excelled in the entire city of New York. The buildings are located at 316 East Fifteenth Street. Dr. N. Gilbert Seymour heads a splendid staff of physicians and surgeons, who give without reserve of their best efforts in the service.

E. M. CLARY.

New York, N. Y.

THE NONVENEREAL CONTRACTION OF GONORRHEA

I read, in the March issue of THE AMERICAN JOURNAL OF CLINICAL MEDICINE, with considerable interest and complete assent, Doctor Lydston's note and also your editorial on the possibility of the nonvenereal contraction of gonorrhea. I have been teaching that possibility for many years and I am glad to see that eminent urologists and medical-journal editors are coming around to my viewpoint.

In my textbook, "The Treatment of Gonorrhea," the first edition of which appeared in 1915, I clearly maintained the possibility of such nonvenereal infection. With your permission, I will quote a few sentences on that topic under the head: "The Treatment of Gonorrhea and Its Complications in Men and Women for the General Practitioner" (p. 21):

"The infection takes place almost exclusively during sexual intercourse. But, note that I said *almost*. I do not deny the possibility of nonvenereal infection, from soiled linen or infected instruments; and, it will not do to sneer at the possibility of infection from a bathtub or the seat of a watercloset."

As I stated there, I once watched an acutely gonorrhreal patient go into a privy. When he got up, there was about half a teaspoonful of thick creamy pus on the seat, at the point touched by the meatus. A person sitting down on that seat within an hour or two would be very likely to get some of the pus transferred to his urethra and to contract gonorrhreal urethritis.

That gonorrhreal vulvovaginitis in girls and in women is very often of nonvenereal origin, goes without saying. Anybody who

has had any practice in this line can testify to that.

That the possibility of nonvenereal infection with venereal disease is now becoming fully recognized is seen from the fact that many institutions and public places in various countries have made it obligatory to use the U-shaped toilet seat, the front of the seat being cut away. It thus becomes impossible for either the male or the female genitals to come in contact with the seat.

This brings up the whole question of the relationship of the physician to the statements of his patient. Too long have we been in the habit of discrediting or sneering at a patient's statements when giving his etiology or describing his symptomatology. Whenever his statements ran counter to the orthodox textbook-teaching, the patient was, *prima facie*, assumed to be a liar. It did not come into the physician's head that it was possible that the textbook either was wrong or incomplete and that the patient was telling the truth. For many centuries, the medical profession used to repeat, as if it were something particularly smart, "*Omnis lucticus mendax*"—every syphilitic is a liar. And this not only before the possibility of syphilis insontium was recognized, but, long afterward. And many a syphilitic man or woman that swore on his or her honor, that he or she had had no extra-marital relations were treated with incredulous contempt and audibly or silently branded as liars.

It is time that there were a radical change in the attitude of physicians toward the statements of their patients. I will not deny that it is possible that now and then a timid or hypocritical man (or woman) will lie to his physician—particularly if he is from the same town and knows him well—as to the etiology of his trouble. But, in the vast majority of cases patients that come to their doctors want to get well and, so, tell the truth; for, they often fear that, by misleading the doctor as to the manner of the contraction of the disease, they will mislead him in the method of treatment. Personally, I can not think of any case in which the patient, male or female, ever tried to mislead me as to the manner of his, or her, contraction either of gonorrhea or of syphilis.

Even when suffering from the habit of masturbation or from some sexual perversion, conditions of which they are much

more ashamed than of gonorrhea or syphilis, I find that they always give me a truthful history. They may hesitate somewhat at the beginning, but, as soon as they are put at their ease, they speak of their conditions as frankly as they do in telling of their suffering from headache or rheumatism or dyspepsia.

W. J. ROBINSON.

New York City.

THE ROLE OF THE PFEIFFER BACILLUS IN INFLUENZA

In reply to your request in the March issue of your journal, and as one of your readers, I venture to give my belief as to the importance of the bacillus in influenza. To my mind, when the socalled Pfeiffer bacillus is present, it simply corroborates the diagnosis. Yet, it may be found present in other diseases.

Is it the cause of influenza? I do not believe that it is. We find it not infrequently in association with certain symptoms, and, when we do, we say that the patient has influenza. When we do not find it, we designate the affection, as a rule, a simple cold or a bronchial attack.

In my estimation, the bacillus is not the true primary cause of disease, even when present. It, rather, is the scavenger, or, the resultant of disease. Again, it simply is the bearer of the influenza-poison. What this poison is, we do not know. I can not explain to myself, satisfactorily, how a living organism can travel and manifest itself the way that influenza does, over very wide areas of country, distinctly separated, in such a very short period of time or, indeed, show itself simultaneously with its appearance elsewhere, and when there could have been no possible human transport or communication. There still is something absolutely undiscovered in the causation of influenza. What it is, precisely, we do not know now any more than it was known centuries ago.

As I believe, essentially, the cause of the rise, duration, and fall of epidemic influenza must be looked for in some obscure atmospheric changes. Are they hygrometric, barometric or chemical? I do not know. Here, the germ-theory of disease fails and must be supplemented both in theory and practice.

As to the direct contagion of influenza from person to person? I believe in it only

to a slight degree. In time of an epidemic, if an individual is very susceptible, he will, probably, contract the disease, no matter how many precautions he carefully observes. If he is moderately susceptible, he is more likely to contract it if he is in close frequent contact with an influenza-patient. If he is immune, he will not get influenza, even if he is in constant service of the affected patient.

What does immunity depend upon? That, too, we do not know. We may be immune at one time and the immunity may last quite a long while, or even permanently. But, also, it is short-lived. People that are ailing or timorous do get influenza, it is true. But, do they contract it more frequently than do those in good health? We often affirm this or at least we think so. Still, statements or thoughts do not make facts.

As to statistics? Few are reliable. Taken from hospitals, surely, they are not. Taken from one's own experience, they are relatively limited and, always, personal. We all judge, largely, by what we have seen and practiced, although, again, our usage is simply individual and makes contracted mental views, unless broadened by thoughtful appreciation of the careful work of others.

BEVERLEY ROBINSON.

New York City.

SIGNIFICANCE OF BLOOD IN THE URINE OF INFLUENZA-PATIENTS

I notice, on page 220 of the March number, a reference to the significance of blood in the urine in influenza, and will say that I had only one such case complicated with bronchopneumonia, the patient making a satisfactory recovery. I thought but lightly of the bad significance of this occurrence, in influenza until I read Doctor Crocket's letter. It is a doubtful hemoglobinuria and when I pushed my echinacea, it cleared with the additional use of a little potassium bicarbonate as a diuretic.

By the way, I had a Negro shot in the region of the kidney with "blood in the urine" and I gave echinacea as a prophylactic, and the urine cleared promptly. I thought nothing about the relation of the echinacea to the disappearance of the blood, but, in a few days, the echinacea having given out, the hemorrhage reappeared and I immediately resumed the drug.

The first 15-minim dose of specific tincture of echinacea cleared up the urine, lastingly, with a continuation of the echinacea. You may take this for what it's worth.

I have a specimen of influenza urine, as brought to me in the original bottle. It has not cleared and has scarcely any sediment; it is of a deep prune juice color.

I gave to my influenza patient calcium sulphide and iodized calcium to a fare-you-well. He ran a temperature of 104° to 105° F. for 8 or 10 days, but, he is still kicking.

What is "flu" but, sepsis, autotoxemia, or sapremia, and a consequent anemia?

A. L. NASON.

Darling, Miss.

[The relation of echinacea to the disappearance of blood in the urine is very interesting, especially in the case of the Negro where the hematuria was traumatic. That suggests an action upon the real mechanism that might be investigated to great advantage.

Doctor Nason suggests that influenza is merely sepsis, autotoxemia, or sapremia, and a consequent anemia. This may be true to a certain extent, although not primarily so. Sepsis, or, better, septicemia, is due to the presence in the blood of pathogenic microorganisms and to the action of their toxic products, while the sapremia is the presence in the blood of the disintegration products of nonpathogenic microorganisms. Autotoxemia, on the other hand, is a term usually applied to the intoxication of intestinal origin, that is, to the absorption of intermediary products of metabolism which are toxic. We have, therefore, three possible conditions suggested by Doctor Nason that might be responsible for an anemia which, however, by no means invariably is a symptom of influenza.

Whatever influenza may be, from the viewpoint of the bacteriologist, it undoubtedly first is a catarrhal or inflammatory condition of the upper respiratory passages which may or may not involve the lung tissue or the bronchial tubes. Whether or not the various pathogenic organisms that are found in the expectorations are primary, is not relevant for our present point. Certainly, they are present and develop their deleterious action, some of them frequently being found in the blood in which case there is always, of course, septicemia. In

the ordinary cases of influenza, however, that is to say, the uncomplicated "three days' fever", the symptoms are not sufficiently serious to warrant the assumption of a septicemia or of sapremia.—ED.]

OBSERVATIONS OF A COUNTRY DOCTOR ON INFLUENZA

I have read with interest the various articles on influenza published in this journal and feel prompted to add some of my own conclusions.

I practice in a little country town in eastern Washington, with a population of about twelve hundred people. There have occurred there 378 cases of influenza from the first of October last to the present writing, thus approximating one-third of the entire population. From these cases, ranging from very mild to extremely severe ones, I have drawn a number of conclusions.

The epidemic did not originate in the village, but, was brought in from outside points. The first cases were mild ones. As it was successively transmitted from one patient to another, those contracting it later had it in the most severe form. Fright seemed to play quite an important role as to whether a case progressed satisfactorily or not. Those patients of even temperament as a rule had it mildly, whereas in those of nervous temperament it was noticeably more severe. The duration of these cases was from four to six days up to three weeks. In four cases, there developed the clinical evidences of bronchopneumonia. There was 1 case of cystopyelitis, and 2 cases of empyema. In all, 5 patients succumbed to the disease during the epidemic.

The symptoms presented were the usual ones of influenza, namely: Intense prostration, fever, bodily aches, pains, soreness and more or less hacking cough. There were departures in some cases, not all of the symptoms named being present in any given case. The unusual prostration was present in virtually every instance, but, was worse in some than in others. Some patients had extremely high temperatures, while in others it was as much as 3 and 4 degrees below normal. In those whose temperature was below normal the prostration was more marked. The symptoms presented in most of the ordinary cases were: pulse, near 100; temperature, up

near to 101° or 102° F.; respirations, 25 to 40. The muscles were so sore that patients would complain bitterly when being handled or moved, saying that, if they had been beaten with a club, they would not be any sorer.

It was found that, if the patients went to bed promptly when attacked, the disease would run a milder course, other conditions being favorable. The systematic requirements being, a warmed well-ventilated room, plenty of light, and quiet. All were instructed not to take into the stomach anything cold, rather, that everything drunken or eaten should be hot. For, the observation was that the influenza-patient progressed more favorably and did better with heat inside and out, rather than the reverse. It was observed even that when a patient drank cold water he soon began to vomit and that an intense gastritis immediately was set up, with the fever rising to an extraordinary degree. Also that, when the patient got up to attend to the calls of nature in a cold room, he always was longer in recovering. Moreover, if the room was dusty, the attack had a more stormy course; also, in dusty homes, every single one of the family would contract the disease quickly, whereas, if there was no dust, only one or two would contract the disease. Consequently, isolation of the patients was insisted upon, the expectoration to be collected on suitable rags or pieces of paper and burned before permitting drying to take place.

The treatment was based upon the individual having the disease, rather than against the disease, itself; the theory being, that it is a self-limited disease and that the patient must be safely tided over; that he should be protected, nourished, made comfortable, his elimination brought to the highest possible state of efficiency and his natural immunity increased to maximum. Thus each case was treated individually, the drugs used being acetylsalicylic acid, Dover's powder, acetanilid, capsicum, the glycerophosphates, and some suitable laxative. The acetylsalicylic acid was prescribed in moderately large doses, Dover's powder and acetanilid in small doses, and capsicum in very small doses. Virtually all patients were instructed to apply to the chest twice a day a mixture composed of equal parts of oil of turpentine and an animal fat, this to be covered with the regulation pneumonia-jacket. In

my judgment, this treatment has been productive of most satisfactory results.

The use of acetanilid seems to be censured by every writer; however, in my own hands, it has worked nicely as well as safely. I have never seen any depressing effects, such as blueness of lips or nails, nor any heart weakness after its use. On the contrary, it exerts a soothing effect, quieting nervousness and producing gentle perspiration. I have tried the various remedies alone and in combination, and see much better results from combinations of drugs, closely following the indications presented.

One observation stands out especially, and that is, that the patient must not be overdosed with anything. Smaller dosing, frequently repeated according to need, yields better results than will large doses far apart.

So far as I could see, no matter what treatment was instituted, fresh air was the most important item; for, no patient did well without it. Three of the deaths undoubtedly were caused from the lack of fresh air.

Virtually all of my patients had hemorrhage of some kind during some period of the course of the disease, and it was, by no means, confined to the lungs. Some 40 or 50 of the women and girls menstruated out of term. Males would bleed at the nose. Improvement ordinarily set in as soon as a heavy bleeding took place. Two patients vomited blood, whether or not the blood had been swallowed from the nose-bleed, I do not know. Several instances of bleeding piles were observed, which, though, were thought to be a recrudescence of old troubles. Nevertheless, improvement rapidly followed in their cases.

In this series of cases, no serums were used at all. Previous experience with serum proved unsatisfactory, so, I considered it best to stick to the old line of treatment with which I was familiar. Further observations would indicate, in a general way, that, locally at least, the "scare" of the disease hurt more than the actual damage done by the disease itself.

As a matter of public health in a ~~small~~ country town, I do not think that ~~any time~~ prevention is anywhere near as efficient in preventing the spread of the epidemic as is the personal isolation of each infected individual or family. In this village, it cost the taxpayers a thousand dollars a

month while the schools were closed, and there was not one case that could be traced to the schools. The epidemic did not seem to affect the children as much as the mature adults. The schools were reopened while in several families in the village there were active cases; but, none of the children of these families were allowed to attend school until the sufferers were entirely cured so far as could be learned by ordinary observation. No new cases have appeared for now several weeks. The ban on gatherings did not control the epidemic locally so far as is known, and not until the *personal-isolation* system was adopted did the spread diminish.

I believe that the infection is microbic in origin and spread by means of expectoration from nose and throat, and that personal resistance (whatever that may mean) has more to do with the results of infection, so far as recovery is concerned, as well as immunity to the infection, than perhaps any other factor. It, therefore, is of special importance to keep this factor of immunity in the highest possible state of efficiency at all times.

I can not but point out the disastrous results incident to the effect on the minds of the people of this community, incident to the use of the term "*Spanish*" in connection with influenza, as also the abbreviation "*flu*."

"*Spanish flu*," as described in the daily press, frightened the people into a panic, the like of which, I believe I have not seen in the last twenty years. The disease has been harder to handle because of this scare. While it is perfectly proper to awaken careless people to an existing danger, yet, I do not think it is a bit worse to have them die of disease than it is to scare them to death by pure fright. Fortunately, no one died from fright here; still, it was a hard problem to handle the case when the patient was frightened out of good judgment before he got down with the disease. Another bad feature is, the lack of confidence, so far as the public is concerned, in the boards of health, who ~~were~~ ~~had~~ these "bans", and which most assuredly did result in considerable financial loss, while, at least locally, it did not prevent the spread of the epidemic.

The greatest trouble that I experienced was, the lack of efficient cooperation of the public in helping to take care of, and

to nurse, the victims of the disease. Trained nurses could not be obtained, while the neighbors, friends, and relatives were afraid to go near those stricken. About the only help available were a few followers of the cult of Mrs. Eddy who were members of the local Red Cross. I wonder whether this deplorable situation did obtain in other quarters? I am not to be understood as favoring this cult; still, in all fairness, I do think that the public mind could have been directed in a way that would not have scared the people before they got the disease. These good ladies did carry a message of help, common sense, cheerfulness, and hope. So far as I know, they attended to all details of my suggested means of treatment, without prejudice. Can as much be said for the boards of health, public charities or other organized effort where such help ordinarily is looked for?

I am glad that the crest of the epidemic appears to have passed. There no doubt will occur a few sporadic cases off and on.

But, what about the future? Many of these patients are up and around, still, do not feel as well as formerly or as well as they should. They do not seem to recuperate as do patients from other acute diseases. They do not get strong and ruddy, do not gain flesh and strength. They are despondent in mind and have little ambition; are weak and nervous. Once more, what about the future? Will it be a fight on tuberculosis, neurasthenia, various forms of insanity, malnutrition, or other dire sequels? I do not believe that the end is yet, and the last chapter of the medical history of this epidemic is not yet written.

J. D.

—, Washington.

[This is a very interesting record of careful and intelligent observations. We are glad that the Doctor stressed the pernicious influence of fear. Personally, this writer is convinced that the fear engendered by scare-head newspaper write-ups and by the astonishing ukases issued by various boards of health contributed, in a not inconsiderable degree, to the spread of the epidemic; while the reverse had been intended. Physicians, whether individually or officially (as members of boards of health) have no right to scare people into

illness; rather, they should comfort and reassure them without causing unreasonable alleged precautions to be taken. Ordinary common-sense care was quite sufficient in our observation to protect individuals against being attacked by influenza.—ED.]

THE MANAGEMENT OF PNEUMONIA

Dr. W. S. Cline, of Woodstock, Virginia, in his article in the February number of CLINICAL MEDICINE, (p. 135.) says that he can do more for his pneumonia-patients with 1-drop doses each of fluid extract of aconite and fluid extract of digitalis every three or four hours than with anything else he can give, besides frequent external applications to the whole chest, as given in his article. If he can, and he ought to know, well and good; but, I believe that "dosimetric trinity No. 1" (Abbott), containing aconitine, digitalin, and strychnine arsenate, given every half hour to one or two hours, according to fever-conditions, would give quicker and better results. For the general weakness in influenza, I believe that the addition of strychnine arsenate in the "trinity" granules is of great value.

In the first stage of pneumonia, aconite and digitalis and perhaps phenacetin or dosimetric trinity No. 1, and phenacetin or aspirin will do well, but, later, other medicines are needed. However, Doctor Cline does not state what he gives after the first stage, unless it is whisky. Since taking up the dosimetric method of treatment—I practiced Homeopathy from 1891 to 1915, principally—I have not given a drop of whisky to my patients. It has not seemed necessary, as I have met every condition of my patients nicely with alkaloidal medication. In the second stage of pneumonia, or, after the first day or so, other medicines should be added to the treatment first begun, such as iodized calcitum, codeine, emetoid, apomorphine or bryonin, one or more of them as indicated. Of course, there are other medicines besides those above mentioned that will be called for in treating pneumonia.

My general treatment for pneumonia is as follows:

1. Laxatives and sometimes enemas, to clean out the alimentary canal.
2. Generally, dosimetric trinity No. 1 throughout the fever-period, every half

hour, if fever is high, until it is controlled, then every hour or two, until fever is gone.

3. For the first day or two, phenacetin or aspirin, 1 tablet every three or four hours.

4. For cough or special treatment of the lungs throughout the full course of the disease, my cough-mixture, as previously given. This cough-mixture has never failed me in controlling the diseased condition of the lungs in all the cases of pneumonia I have treated.

5. For pain, distress, and sleeplessness, a hyoscine-morphine-cactoid hypodermic or the modified form mostly given by mouth. Do not be afraid to give hyoscine-morphine-cactoid tablets, exercising reasonable care, and thus relieve your patients of much suffering and at the same time modify the disease. I know that relief from pain, distress, and insomnia, by using these tablets to effect, hastens recovery.

6. Make local applications to the chest—camphorated oil, glycerin paste, and so on—and hot packs, if the lungs are painful. Give some digestive tablet and triple arsenates with nuclein during convalescence.

G. A. EVENSON.

Janesville, Iowa.

THE PATHOLOGY AND TREATMENT OF INFLUENZA

I am fully aware of the fact that a great deal has been written on the subject of influenza. Much has been stated and conjectured as to its etiology, pathology, and treatment. My aim is not, to enlighten the reader on the first, to elaborate on the second or be specific as to the third of these points; but, only to point out certain facts that have been impressed upon me in my work with this infection. I have no definite opinion to express as to the causative factor, as I am not a bacteriologist, but, from observation and reading, I am quite sure that the field for research is an open one.

The symptomatology of the disease is quite familiar to all, hence, needs no discussion; however, the physical findings constitute a basis for quite a bit of thought and deduction.

In my cases, numbering nearly 500, about 87 percent of the patients had a dis-

tinct tenderness on the right side opposite the articulation of the ninth rib, and a majority had hepatic enlargement. The urine was highly colored, contained traces of bile, and was loaded with phosphates before the fever had had time to give rise to them. A marked accentuation of the heart-sound in the pulmonary area persisted during the fever-period. Ninety-five percent of the patients, ranging in age from 11 to 25 years, presented bronchial breathing to the left, posteriorly; also, epistaxis and hemoptysis were a rule, especially if treatment was not instituted early. Tympanites and constipation were invariably present.

Taking into consideration the preceding facts and a few more that I will bring out further down, I allocate the pathology to the biliary system, primarily, and to the pulmonary system secondarily.

I will not attempt a hair-splitting decision as to which is involved, the liver-substance as a whole or just the biliary passages. But, of this I am sure, an inflammatory process does exist there; this being evidenced by fever, cough, epistaxis, hemoptysis, passive congestion of the lungs, accentuated pulmonary heart-sound, flatulence, constipation, bile in the urine, and a general toxemia. The passive congestion of the lungs is shown by the multiple hemorrhages, which have been attributed to the presence of the streptococcus hemolyticus, the lesions becoming multiple abscesses after their infection by the bacteria present in the air.

I have seen no case of lobar pneumonia or at least very, very few, but, in these, the condition was a much more grave one.

Treatment was instituted with the foregoing facts in mind, not thinking that as yet we have a specific for the condition. Elimination was my first aim, which was effected by means of calomel, blue mass, and podophyllin, followed by castor oil—and a very liberal dose at that. And, why these drugs? Calomel and blue mass as hepatic excitants, and podophyllin is for the bile; castor-oil, to sweep out the intestinal tract and to pave the way for intestinal asepsis. This medication was repeated every twenty-four hours until the tympanites was relieved; and this never was accomplished until there occurred the passage of a large amount of jelly-like mucus followed by a large bilious stool and of which latter the patient complained severe-

ly because of its causing excoriation. While serving in the hospital, I was impressed by the fact that, in infected gall-bladder cases, as long as the discharges were of clear, colorless gelatinous consistency, the fever persisted, and that, when bilious drainage set in, the fever would disappear. So, in my patients, after they passed this gelatinous substance in the stool, followed by bile, and accompanied by a burning, scorching sensation, their temperature came down to normal, the cough became less troublesome and grew moist, the sputum was freed from bright-red blood, the tongue became clean, appetite returned, heart-sounds were normal, tympanites disappeared, and the toxemia disappeared.

Not having a specific at hand, the next thing to do was, to build up barriers to guard against further bacterial invasion. Bacterins or phylacogens were given, to increase leukocytosis and especially to fortify against lung invasion, because of the receptive field present. These remedies were repeated as deemed necessary, no regard being paid to the reaction. Iodized calcium, 2-grain tablets, and one tablet of the combined sulphocarbonates, crushed in warm water, were administered every two hours. Why? Iodized calcium splits into calcium and iodine when taken into the body. The calcium is a cell-tonic, especially a food for the heart-muscle—and only a very small number of my patients received heart-stimulants. Iodine, being largely exhaled, becomes a lung-antiseptic. Never before was the cleanup and keep-clean measure more needed than in influenza; and my belief as to its pathology demands intestinal antiseptics. And the combined sulphocarbonates are a real intestinal antiseptic.

It is a fact that a great number of my patients contracted bronchopneumonia, or, as I am inclined to believe, multiple pulmonary abscesses resulting from the infected multiple hemorrhages, the latter produced by the passive congestion of the lungs. Whenever the so-called pneumonia-symptoms occurred—and this usually was on the fifth to seventh day—a "proteogen" was given. And I wish to state here that I will not try to explain its mode of action. It acts, and does so better, than any other remedy that I have ever tried. The proteogen was given every twelve to twenty-four hours, as symptoms indicated. The most pleasant results were experi-

enced from its use; but, at no time was the treatment outlined above relinquished, the proteogen just being given in addition.

The diet is of great importance. The patients kept on a diet free from starch progressed very much more rapidly than those partaking of it. Tympanites always was less in a starch-free diet.

Complications were: Otitis media, pleurisy with effusion, delirium tremens, and enormous pulmonary abscess. These conditions necessitated individual treatment. Otitis media, after proper surgical measures, improved very rapidly under chlorazene. Pleurisy with effusion yielded to mercury bichloride internally and the continued use of the proteogen. Pulmonary abscess was treated symptomatically, and, under the continued use of the proteogen, recovery was complete.

Six pregnancies, ranging from eight weeks to eight months, were encountered. All these women recovered from the influenza. One has been delivered since then, and the babe and mother are doing finely.

A few conclusions: The hepatic system is the site of the pathologic condition, primarily; the pulmonary system, secondarily. There is no specific for the disease so far demonstrated.

Rational treatment: Guard against cardiac weakness, make an effort to prevent pulmonary infection, clean up and keep clean. Iodized calcium covers the first two indications, and while the sulphocarbonates insure the keeping clean, calomel, blue mass, and podophyllin, and castor-oil make sure of a thorough cleanup.

Sodium salicylate has been the cause of abortions in some instances, I am sure.

I hope that this communication will elicit very wide discussion and be a means of helping solve the riddle of this epidemic influenza. I will say, in passing, that I have not had one death from the disease. One patient died from cardiac failure after the symptoms had passed; but, he had been a sufferer from myocarditis for a long time.

G. C. GILFILLEN.
Russellville, Ohio.

THE WORK OF THE RED CROSS GOES ON

The great humanitarian trend that has developed as an aftermath of the horrors

of the war has awakened the peoples of all countries to the immediate need for developing these humanitarian efforts along the broadest lines.

The amazing percentage of men rejected for military service because of physical conditions that might easily have been prevented; the pitiful wastage of manhood and womanhood through under-nourished and under-developed childhood; the terrible mortality consequent on epidemics which, if not actually preventable would at least have been more controllable if humanity at large had a better understanding of hygiene and sanitation, all these

France, Italy, Japan and of the United States.

The problem which these men discussed, is one of the most serious ever faced by the Red Cross, and deals with the organization of an International Council of Bureau of Hygiene and Public Health which will consider the work to be undertaken in connection with the prevention of epidemic disease, tuberculosis, venereal disease and child welfare. The results of this conference will be submitted to the International Conference of Red Cross Societies to be held at Geneva, Switzerland, thirty days after peace is officially



Some of the American Members of the Public Health Conference at Cannes, France.

things have been brought so forcibly before the minds of thinking people that remedial efforts are not only necessary but imperative.

To turn to the Red Cross as a medium through whom this widespread educational campaign may be carried on all over the globe, is natural. Closely in touch with every phase of relief, whether it be war, disaster, epidemic or the personal contact with individuals maintained through the special branches of its work, the Red Cross is peculiarly well fitted to aid in this international service.

Recently there was in session, at Cannes, France, a conference attended by some of the foremost specialists of the medical and sanitary professions of Great Britain,

declared. This Red Cross Committee will be composed of representatives from the Red Cross Societies of the five countries represented at Cannes and Henry P. Davison, formerly Chairman of the War Council of the American Red Cross, will act as Chairman.

The outgrowth of this congress will be a permanent working organization, with headquarters in Geneva, whose personnel will be made up of experts who will keep in touch with the developments throughout the world of the various matters in which the Red Cross is interested and through whom each Red Cross organization will be kept in touch with the march of human events. Not only will the peace activities of the Red Cross be directed toward the

relief of human suffering and its prevention, but an effort will be made to arouse all peoples to a sense of their responsi-



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First Aid at the Fighting Front.

bility for the welfare of their fellow beings.

HOSPITAL TRAIN MAKES FIRST TRANSCONTINENTAL TRIP

For the first time in the history of the army a complete hospital train made the entire transcontinental trip from New York City to Camp Kearney, Cal., during the last week in March. It carried 136 sick and wounded overseas fighters who had been evacuated from Debarkation Hospital No. 3 in the old Greenhut Building, Debarkation Hospital No. 5 in the old Grand Central Palace, New York City, and the Base Hospital at Camp Merritt, N. J. The patients were all men from the far West who were being removed to the hospital nearest their home towns.

The men were accompanied virtually the whole length of the trip by Red Cross workers who were on duty in relays. At each stop a pair of Red Cross women boarded the train and rode to the next station, where they were relieved by their Red Cross sisters in that town, who took

up the work where they left off. This arrangement worked perfectly.

The train was in charge of the Medical Department of the United States Army and, in addition to the invalids, carried a large escort detachment of enlisted men of the Medical Department. Towns and cities along the route were notified of the departure of the hospital train and the expected hour of its arrival and the boys received a riotous welcome at every stop. In like manner, every Red Cross auxiliary was on hand to regale the heroes with good things to eat, drink, and smoke.

CONSTIPATION: ITS CAUSES AND TREATMENT

I am aware that the subject chosen for consideration is one that is a commonplace one and has been thrashed out by authors great and authors small; yet, I doubt whether all the grains have as yet been separated from the chaff. If, in active medical practice, there is one condition calling for the physician's aid more often than anything else, it is constipation. How often has it not been said that constipation is the great disease of civilization and, in fact, one of the greatest drawbacks to the rapid advancement of the arts and sciences, and that those who suffer from this diseased condition are sluggish and dull and can not do the brain-work or stand up to the mental fatigue sustained by those not so afflicted.

The causes of constipation are as numerous as are its untoward consequences, since it may be owing to, or the result of, a wide range of abnormal conditions.

Constipation may be consequent upon diseased meninges of the cerebrospinal centers; on pressure exerted by various tumors of the abdominal cavity or on a variety of diseases of the stomach and liver. In fact, what morbid condition may not determine constipation? Even the mere neglect to go to stool whenever nature calls will soon lead to a pronounced constipation, with all its dire consequences. It often is associated with obstruction of the pyloric end of the stomach, with a tonic dyspepsia, with jaundice, or with pregnancy or with old-age. Also rapid eating or the eating of undigestible food may predispose to it.

Someone has said that one-half of the American people are suffering from a

stuffed gut, this sooner or later leading to dilatation and sagging of the stomach and portions of the intestinal tract, which, in time, eventually will produce constipation. In fact, anything that causes an abnormal delay of the intestinal contents in their onward passage through a portion or portions of the gastrointestinal tract will, most certainly, end in constipation, if not betimes corrected.

As already stated, the results produced by constipation or intestinal stasis are so numerous that no one can be in prime health and be able to give to society the best that is in him while suffering from constipation.

Very recently, one of our ablest physicians said, "Careful clinical observation is convincing me, day by day, that the question of intestinal stasis and its consequent morbidity is one of the most important subjects before the medical profession at this time."

If constipation from whatever cause be neglected, the sensitive nerve-elements supplying the mucous membrane of the bowel soon are obtunded and gradually become blunted, while the muscular coats of the colon soon undergo atrophic changes. The chain of glands along the gut quickly become hypertrophied and fail to pour out their secretions, as they do in health, while the peristaltic movements grow weak and ineffective.

The onward movement of the intestinal contents grows more and more sluggish and, unless prompt and effective treatment is brought to bear upon the condition, the patient will find himself or herself the victim of constipation that will to the utmost tax the skill of his physician to correct. I know of no diseased condition affecting humanity, that is so prone to produce autotoxemia, or self-intoxication, as is constipation, because, in stasis, the intestinal canal becomes a veritable hotbed for the development and multiplication of pathogenic germs, while the conditions here are present for the rapid absorption of their poisonous toxins.

It is not possible, in a short paper like this one, to enumerate all the conditions that may arise from constipation, but, they are many and far-reaching. If there is any one thing that has been impressed upon my mind more forcibly than any other (in twenty years of practice) in attempts

to prevent this disease or to aid in correcting it, it is, that we must keep the alimentary canal clean. "*Clean out and keep clean*" is a motto that never should be lost sight of. In all diseased conditions, there obtains a sympathetic relationship between the various organs, however remote from the actual site of the disease. This is why so many people afflicted with constipation also suffer from headache, vertigo and neuralgias. We also find these patients suffering from torpid liver, indigestion, palpitation, and often from a reflex cough. When the bowels are thoroughly cleared, all the foregoing symptoms are relieved, the engorged portal circulation is freed; the processes of absorption and assimilation once more become normal; the constant introduction of toxic substances into the general circulations comes to a halt, and many nervous phenomena right themselves.

This would lead us to believe, indeed, clinical evidences bears us out, that, by curing our patients of constipation and putting the intestinal tract into a normal condition, this will, of itself, cure them of many ills now complained of. This is especially true when the constipation is the cause and not the result of the diseased condition. I know of no disease in which proper treatment affords the patient so much good as that of constipation.

In treating this condition, we should not leave a stone unturned in our search for discovering its cause, and to remove that, if it be possible.

In treating this diseased condition, the physician is not handicapped by the lack of remedies. They are numerous, indeed, however, the test comes in knowing how to select and to apply them in each individual case. It is not hard to find remedies that will move the bowel, but, to find one that will overcome the tendency to constipation and one that can be gradually withdrawn, leaving the bowel in a normal healthy state, is not so easy.

The tendency in the case of most laxative remedies is, for them to lose their initial effect, so that the size of the dose has to be increased rather than diminished. This is especially true when the medicinal treatment is not reinforced by diet, exercise, massage, and a regular habit of going to stool at a certain hour each day. Many of the remedies are recommended to be

used singly, but many more are prescribed in combination. Just how they are to be used depends upon the cause of the constipation, if that be found, or upon what part of the intestinal tract we wish to exert an influence.

Purgative remedies are but rarely indicated, except in beginning treatment in a certain class of patients. Those that are very heavy eaters and who are more or less sedentary in their habits and have suffered from constipation for a long time need brisk purgation. In other words, when the physician believes the alimentary tract is loaded with fecal matter, he should prescribe sufficient purgatives so as thoroughly to cleanse it. I have obtained excellent results in these cases from a combination of calomel, podophyllin, and bilein. These granules are given every hour until the bowels have moved a number of times, then finish up with a laxative saline.

Patients who suffer from an atonic condition of the alimentary track, are best treated by prescribing two tablets containing berberine and juglandoid before meals; hydrastoid, 1-6 grain after meals, and 3 to 6 of Waugh's anticonstipation granules at bedtime. Patients who are sallow in color, conjunctivæ tinged yellow, and complaining of a bitter taste upon rising are best treated by administering juglandoid before meals with bilein and chionanthoid after meals. If the patient is active, enjoying outdoor exercise and is regular in habits, this may be all that is necessary. Should the patient be living a very sedentary life, you will be compelled to reinforce the above measures by giving podophyllin, gr. 1-16 and berberine hydrochloride, gr. 1-6, three times daily between meals and at bedtime. In these cases, it is almost impossible to cure the constipation, unless the patients are made to feel the responsibility that is theirs and agree to aid the doctor by changing their habits.

If constipation is principally in the lower bowel and the excrements consist largely of hard balls, then the contents higher up probably are normal. In that case, add aloin to the course. Many of these patients

are either cured or greatly benefited by stretching the sphincter ani.

In cases that defy every kind of treatment calculated to break up the condition, I have found liquid paraffin, to which fluid extract of cascara has been added, one of the most efficient remedies. This is especially true in those cases requiring a remedy for a long time. The amount of cascara can be increased or decreased according to the indications. Do not fail to explain to those that are constipated the importance of a daily evacuation and that it is possible to train the bowel to send its contents into the rectum at a stated time daily, for, if this periodicity can be secured, they have a powerful aid toward regular and complete evacuation. Dilatation of the intestine from atony is, perhaps, the commonest cause of constipation. This atony exists in various degrees, depending upon the cause that produced it and the length of time the patient has been constipated. The nerve-filaments supplying the gut may be only slightly benumbed or, in far-advanced cases, they may be paralyzed. This paralysis may, and does, extend to the centers in the spinal cord presiding over peristalsis and defecation. In treating cases in which this condition is advanced, belladonna or strychnine should be administered in order to aid in restoring the nerve-tone. Nux vomica is another useful remedy in this direction. Electricity certainly should be tried in stubborn cases. In that peculiar kind of constipation seen in persons suffering from catarrh of the small intestines, hydrastoid should not be forgotten as one of our most reliable remedies.

Constipation in children and delicate females that suffer from "biliousness" and flatulence is well treated with sulphur laxative granules, one to three to be taken one hour before meals. Should this dose fail to act satisfactorily, then repeat one every hour, for two or three doses, before going to bed, according to the age and condition of the patient.

C. M. CANAN.
Orkney Springs, Va.



Just Among Friends

A DEPARTMENT OF GOOD MEDICINE AND GOOD CHEER FOR THE WAYFARING DOCTOR

Conducted by GEORGE F. BUTLER, A. M., M. D.

Opportunity: As Exemplified in Ole Hanson.

THE Minneapolis Tribune sums up the career of Mayor Ole Hanson, who settled the recent strike at Seattle, as follows: "Fifteen years ago, Ole Hanson came into Seattle on foot. He had walked from Butte, not from choice, but, from necessity. In Butte, he had injured his spine. Doctors despaired of his recovery; but, Ole did not. He bought himself a prairie-schooner outfit, to which he rigged a harness that held him upright and allowed him to walk behind; with his wife on the driver's seat and his children inside, Ole trudged across two mountain ranges to Seattle. He arrived in Seattle late one afternoon. Coming through one of the residence streets known as Beacon Hill, he stopped in front of a little grocery-store to buy some food. That night, he was the owner of the store, which he opened next morning. He had not yet entered the business-district.

"He sold the grocery-store and opened a real-estate office, and, despite the fact that he has always been in politics, his business was always a big success. He is the best advertisement-writer in Seattle, and no man who ever bought a piece of property of him was forced to keep it if dissatisfied. The buyer can always have his money back.

"When he first came to Seattle, Mayor Hanson was a Republican. In turn, he became a Progressive, and he toured the Middle West for Wilson in the last campaign, speaking in Minneapolis and elsewhere in Minnesota. Parties mean nothing to him.

"There are really two Ole Hansons: the one that talks and the one that acts. As a talker, he often is erratically radical; but, his actions always are rational. In the last mayoralty elections, he was voted for as the lesser evil by the conservative business-elements. Once in office, he began to do the things that other mayors had talked

about for years. He is irrepressible and can not be abashed. He wanted the city to buy a power-site involving millions and at once ran into the capital-issues committee. He went to San Francisco and was rebuffed. Then he took the train for Washington and pulled the President's mind off the war long enough to get action.

"His energy is endless, his sense of the dramatic is high, his courage boundless, and, in the back of his hard head, there is a big fund of common sense, on which he draws in every emergency. And those that didn't know him intimately were astonished at the prompt manner in which he suppressed Seattle's little revolution."

It is not too much to say that Ole Hanson, as a man, the mere equal of every other citizen, would be unrecognized among the millions of his fellow citizens, were he not conspicuous as the man who had the courage to "sit tight" and "stand pat" at Seattle when the city was threatened with Bolshevism.

His place today, the reputation he enjoys, as a result of the achievements attained, considered in the light of his relation to the public, have distinguished him as the exponent of principles that lie deep within the heart of every true American citizen.

The courage and independence of this man are superb. He said: "Protestant or Catholic, Jew or Gentile, all must stand equal before the law. To do more, would be special privilege; to do less, would be violating my sworn duty."

I am not certain just what Ole Hanson's politics are, and it is immaterial. In my opinion, his sentiments: "A man that won't leave his party for the good of the country should leave his country for the good of all parties," and, "Good government consists in making it easy to do right and hard to do wrong," should cause "every wise man to abhor and every good man to

condemn those who refuse equal justice to all the people."

America, in the past, spelt opportunity, and the career of Ole Hanson shows the value of opportunity to those that can perceive it.

When I hear, as I occasionally do, a man bragging of his true Americanism, because he is the son of a revolutionary hero or a lineal descendant of a Puritan that came to America on the Mayflower, I am reminded of the blistering, although unconscious, satire uttered by the First great Democrat of all the earth. He, who, to plead the brotherhood of men, predicated the Fatherhood of God, when he said: "Think not to say within yourselves, 'We have Abraham to our Father,' for, I say unto you this, God is able of these stones to raise up children unto Abraham," and we must rejoice that this principle, as all principles must, holds good today.

If the indifference, the neglect, the ignorance or whatsoever defect of conduct and character on the part of four generations of the sons and daughters of revolutionary heroes have permitted conditions to arise in the republic that they established, that limit opportunity, nevertheless, the principles of social justice have power, out of the millions of alien earth transplanted here, to raise up those that should vindicate their truth.

If I were to select a text for a studied article of length, upon a subject near to me—and, I believe, of glowing interest to all thoughtful Americans—I should choose "Applied Patriotism" as the central thought. I should illustrate my meaning, in this connection, by a comparison of those cities in the republic that contain the greatest admixture of foreign stock with those containing the least, and I should show, by a tabulated result, that the civic virtues, political integrity, and moral worth of American cities are in direct ratio for the proportion of its foreign population.

Aristocracy, the only aristocracy in America, is the aristocracy of great service. Opportunity, opportunity in America, the only opportunity of value, is, the opportunity to serve. And, in Ole Hanson, we have a fitting embodiment of all that is best in both.

It is a significant fact that, in all those whose names are first as the exponents of

progressive political philosophy, endowed with distinguished capacity to serve, we find the recent admixture of European stock. And, there must be some underlying law in accordance with which the debt of Democracy to the frontier and the raw edge of things finds such expression.

With Hughes, of New York, son of a Welshman; the late Governor Johnson, son of a Scandinavian; and our President, the near, in descent, to the Englishmen; all showing the quick response of free opportunity upon a nature not yet immune to its advantages, we find the current chapter of the Drama of Democracy reaching back, through Lincoln, Jackson, Garrison, and Jefferson, to Washington in unbroken line of descent from the frontier; and it would almost seem that there were some alchemy in the uncontaminated air of that frontier-life.

Patriotism, applied patriotism, love of country. It is not the green turf, beautiful though it be; not, the sweet air and sunshine that make up a country; the mountains, rivers, lakes do not constitute a country. A country is a people and a people's laws. We love our country and shall continue to love it and its institutions just so long as they are worthy to be loved.

Tiberius Gracchus, in curia and forum, defending the agrarian law, answered the attacks of those that represented, in that day, intrenched and fortified privilege, anticipating the utterance of Jesus, said: "The beasts have caves, but, the men that shed their blood for Rome have nothing but the air and light."

Love of country, respect for law does not ask Americans to love or support a patriotism that permits the establishment of laws and institutions that work injustice.

If there should come a time when all the nations of the earth shall form one vast confederacy, in which due representation shall be given to each, "and the battle-flags are furled in the parliament of nations, the federation of the world"—a fact by no means so fanciful as when Tennyson voiced that thought, in view of what is transpiring in Paris today, it will be owing, as much as to any other single influence, to the ideals and to the efforts of such men as I have named. By any philosophic test, as the city is to the state, so is the

nation to the entire world. It is in the microcosm that cosmic problems may first be determined. The principles of justice underlying fundamentals of social order are not limited in their application to any single individual or family.

If the determination of social formulas were simply a matter of opinion and, by popular adoption, became, by that act, intrinsically just, the solution of the problems of the world-politics would be very simple. However, they are not matters of opinion; they are inexorable expressions of natural qualities, as fixed as the laws of chemistry or physics.

We are reminded of the competition between Alcamenes and Phidias in the application of tests to determine values, and

that we may approach so closely to great figures as to lose the sense of proportion; but, whether it be upon a question of municipal, state, national or international social relations, Mr. Hanson has stated and, also, applied the universal standard of justice.

And, so, I honor Ole Hanson for the service he has rendered in the demonstration of the value of opportunity, in the fitting aristocracy of service to which he of right belongs, and in the future years of usefulness that I hope lie before him. As compatriots, we rejoice with him in the struggle that lies before us to secure and maintain, for future ages in this land, that wealth of opportunity of which his own career is a majestic exemplar.

JUST WHISTLE A BIT

*JUST whistle a bit if the day be dark,
And the sky be overcast;
If mute be the voice of the piping lark,
Why, pipe your own small blast:
And it's wonderful how o'er the gray sky track
The truant warbler comes stealing back.
But why need he come? For your soul's at rest
And the song in the heart, Ah! that is best!*

*Just whistle a bit if the night be drear,
And the stars refuse to shine,
And a gleam that mocks the starlight clear
Within you grows benign:
'Till the dearth of light in the glooming skies
Is lost to the sight of your soul-lit eyes.
What matters the absence of moon or star?
The light within is the best by far!*

*Just whistle a bit if your heart be sore,
'Tis a wonderful balm for pain.
Just pipe some old melody o'er and o'er
Till it soothes like summer rain.
And perhaps 'twould be best, in a later day,
When Death comes stalking adown the way,
To knock at your bosom and see if you're fit,
Then, as you wait calmly, just whistle a bit.*

—Paul Lawrence Dunbar.

Among the Books

SHERMAN: "FOOD AND NUTRITION"

Chemistry of Food and Nutrition. By Henry C. Sherman, Ph. D. Second Edition Rewritten and Enlarged. New York: The MacMillan Company. 1918. Price \$2.00.

It is to be feared that, with a great many physicians, certainly most of those having graduated fifteen and more years ago, the experimental basis of dietetics is somewhat hazy and not sufficiently exact to enable them to decide upon the food requirements in a given case in order to correct existing conditions of malnutrition. Dietetics does not consist solely in the ability to prescribe foods that are easily digested. The application of dietetic rules must be adjusted to the individual requirements of the patient fully as much as must the drugs that may be prescribed for him. In like manner as, for a useful knowledge of pathology, it is necessary to be familiar with physiology since pathology is but abnormal physiology, so, the food requirements of the diseased organism must be determined with reference to those of the normal organism and with consideration to the abnormalities and perversions in metabolism that exist.

It is, therefore, of importance to study a volume like the one before us in which the questions of nutrition are discussed in a manner to enable the physician to apply the information gained in prescribing suitable foods for sick people. Doctor Sherman takes up successively the chemistry of the various foodstuffs, as, carbohydrates, fats, proteins, then discusses the enzymes and the process of digestion describing the fate of the foodstuffs in the course of metabolism. After this, the fuel value of food and the energy requirements of the body are considered, attention being given to the requirements of proteins as well as of other foodstuffs, including minerals.

In view of the importance acquired of recent years by deficiency diseases, such as scurvy, pellagra, beriberi, the chapter on

antiscorbutic and antineuritic properties of certain foods is of special interest. Further, it is necessary to be familiar with the importance of food in the relation to growth and development.

Thus, a study of Doctor Sherman's volume will lead the student to the recognition of the food requirements of the healthy, and, by inference, of the diseased organism whereby the laws of dietetics will be complied with more correctly because with reference to physiological laws.

WILEY: "BEVERAGES"

Beverages and Their Adulteration, Origin, Composition, Manufacture, Natural, Artificial, Fermented, Distilled, Alkaloidal and Fruit Juices. By Harvey W. Wiley, M. D. With 42 Illustrations. Philadelphia: P. Blakiston's Son & Co. 1919. Price \$3.50.

Doctor Wiley's textbook on the origin, manufacture and composition of food products, which was published a few years ago, finds in the book before us a companion volume that completes the information on food-drinks as well as beverages, in a highly acceptable manner. Doctor Wiley takes up, after an introduction discussing the general peculiarities and characteristics of beverages, the consideration of water, plain and mineral, after which he describes the origin, composition, manufacture, and so forth, of soft drinks and fruit juices, all of which are acquiring a constantly increasing importance, especially since the adoption of the constitutional amendment in accordance with which the use of alcoholic beverages will become illegal in the near future. Information given about coffee, tea, cocoa and chocolate, also, not only is interesting but of definite usefulness.

Further, chapters dealing with wine, beer, ale and other malted drinks, then the distilled beverages, whisky, brandy, rum, gin and the cordials have been introduced deliberately, Doctor Wiley pointing out that these by no means are out of place. In-

deed, "the American citizen who desires all the information possible in making up his mind on this question certainly will be helped by a knowledge of the origin, manufacture, chemical composition and geographical distribution of the various forms of alcoholic beverages, both fermented and distilled."

A discussion of alcoholic remedies and of beverages containing cocaine closes the volume which is further supplied with a carefully prepared index of subjects.

The treatment of the various subjects dealt with in this volume is exceedingly interesting, a surprising amount of valuable information, including historical notes, being presented. Doctor Wiley has claims to the gratitude of physicians for having collected in his two volumes all the salient and relevant information on the characteristics of foods and beverages that the physician should be able to secure on call. Both books should be found in the library of every physician and should be consulted frequently.

"PROGRESSIVE MEDICINE"

The March issue of *Progressive Medicine* contains the customary discussions of the recent literature on surgery, infectious diseases, diseases of children, and some of the specialties. As is very natural, the abstracts of the literature dealing with infectious diseases, notably pneumonia and influenza, are of particular interest in view of our recent experiences with these serious epidemic maladies.

Progressive Medicine is a quarterly digest of advances, discoveries and improvements in the medical and surgical sciences, being edited by Dr. Hobart Amory Hare, and Dr. Leighton F. Appleton, and published by Lea & Febiger, in Philadelphia and New York, at a subscription price of \$6.00 for the four annual numbers. The number before us contains over three hundred pages of text, from which it may be seen that it is by no means an expensive publication.

POPE: "DIETARY COMPUTER"

A Practical Dietary Computer. By Amy Elizabeth Pope. New York: G. P. Putnam's Sons. 1917. Price \$1.25.

Having studied the subject of foods and nutrition as outlined in Doctor Sherman's

volume, discussed in this issue, and having familiarized himself with the rules outlined in textbooks on dietetics, the physician will still be grateful for a small handy volume that contains in condensed and available form lists of foods and their composition as to protein, fat, carbohydrates and water, as well as the available heat units to be derived from them and which will therefore enable him readily to arrange dietary lists for those of his patients in whom the problems of diet are of essential importance.

The author has prepared the little book more especially for nurses and others whose knowledge of dietetics is not very extensive. Nevertheless, it will form a very convenient reference book even to the physician who has studied the subject of dietetics in all its phases. We believe that Miss Pope's little volume is of great interest and it is cordially recommended.

LLOYD: "LICE"

Lice and Their Menace to Man. By Lieut. L. L. Lloyd. With a Chapter on Trench Fever by Major W. Byam. London: Oxford University Press. 1919.

Under normal conditions the body louse is not spoken of by, much less received in, the best society. However, the war has changed all that and the cootie, that little pest the visitations of which seemingly could not be escaped by anyone in the trenches, proved to us that the louse lives in a closer association with man than does any other insect.

It was but natural that the problems connected with the "life and works" of *pediculus humanus* and its kin should be made the subject of monographic treatment. This is presented concisely in the volume before us in which all information about the body-louse, head-louse, and crab-louse is presented and more particular account is taken of the various diseases that are disseminated through the agency of these insects.

WARBASSE: "SURGICAL TREATMENT"

Surgical Treatment. A Practical Treatise on the Therapy of Surgical Diseases for the Use of Practitioners and Students of Surgery. By James Peter Warbasse. In Three Volumes, With 2400 Illustrations.

Volume III. Philadelphia: W. B. Saunders Company. 1919. Price \$30.00 per set.

With the present volume, Doctor Warbasé's practical treatise on the therapy of surgical diseases is completed. The third volume deals with the treatment of hernia, diseases of rectum and anus, the vermiform appendix, liver and gall-bladder, genitourinary organs, male and female; then, surgical diseases of the extremities, plastic and cosmetic surgery, electricity as it applies in surgical treatment and first aid to the injured. There is a splendid chapter on bandaging and one of the economics of surgical treatment, while an appendix deals with surgical materials, instruments, anesthetics, and so forth.

The usefulness of this work is much increased by the complete index which is added in a separate volume for handy and convenient reference.

GARDNER & LINCOLN: "LABORATORY DIAGNOSIS"

Manual of Laboratory Diagnosis. By Stella M. Gardner, M. D., and Mary C. Lincoln, Ph. B., M. D. Chicago: Chicago Medical Book Company. 1917. Price \$1.25.

There is a constant call for small and handy laboratory guides, although a considerable number of these manuals is available. The authors of the little book before us are known to Chicago physicians as reliable and accomplished laboratory workers. Their purpose was first, and chiefly, to give practical working directions for making the important clinical laboratory tests, and, second, to give the clinical significance of the findings. In the opinion of the Reviewer, the second purpose deserves to be stressed more than has been done in the past. It is seemingly simple enough to receive the results of a uranalysis. The inferences to be drawn from a uranalysis report, however, are all too often beyond the ken of the general practitioner. Indeed, it occurs frequently enough that we are consulted on exactly that point. The Reviewer would like to see a book pub-

lished in which the reading of laboratory reports is discussed in greater detail than is customary and in which the inferences that may be drawn are outlined on the basis of typical examinations, in such a manner that the practitioner will gain some definite information that will prove of actual and practical value to him. While, for instance, the discussion on pages 60 to 66 of the little book before us are very good, we miss suggestions as to what significance is to be attached to the presence of indican and skatol, of oxalates and other substances, the presence of which causes urinary findings to be abnormal.

STITT: "TROPICAL DISEASES"

The Diagnostics and Treatment of Tropical Diseases. By E. R. Stitt, M. D. Third Edition Revised. With 119 Illustrations. Philadelphia: P. Blakiston's Son & Co. 1919. Price \$2.00.

The present, third, edition of Stitt's textbook of tropical diseases follows its predecessor in less than a year. It has justly been decided that there was no need for any material changes in this edition. However, in view of the decided advances in our knowledge of trench fever, this subject has been rewritten.

A textbook of tropical diseases is not of interest solely to physicians living in tropical and semitropical countries; we in the United States of America, even in the northern states, often have our attention directed to problems that confront our southern colleagues constantly and it is incumbent upon us to acquire at least a working knowledge of diseases peculiar to countries situated in the torrid zone. Of all the textbooks on the subject with which we are familiar, Doctor Stitt's treatise seems to us to be the most practical one and the most informative. It is small and handy, well written, the description being terse but entirely adequate for practical use. This textbook is recommended cordially to physicians desirous of acquiring a working knowledge of tropical diseases and their treatment.



Condensed Queries Answered

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report their results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

Queries

QUERY 6424.—"Arteriosclerosis, and Calcium Salts." C. W., New York, desires to know whether the combination marketed under the tradename of "Calcalith" (calcium carbonate, grs. 10; lithium carbonate; gr. 1, colchicine, gr. 1-500; aromatics, q. s.) is indicated even when arteriosclerosis is complicated with the uric-acid diathesis; his doubt being because of the calcium in it.

While we cannot at the present moment, refer you to any definite literature, we remember that the importance of calcium in the causation and maintenance of arteriosclerosis has been emphatically questioned, and we are under the impression that the presence of calcium in a remedy presents no contraindication whatever in the treatment of the uric-acid diathesis in a patient also showing signs of arteriosclerosis.

You will remember, doctor, that an important part of the treatment in the uric-acid diathesis and in arteriosclerosis is, the supervision of the diet. In the *Journal of the A. M. A.* for November 30, 1912 (p. 1935), T. F. Coleman reminds us that the majority of patients eat too much, and nearly all of them too rapidly. In mild cases, cutting down the diet may be sufficient, eliminating such articles as are likely to overburden the alimentary tract and the kidneys. In general, meat should be eaten but sparingly. The sugars may be borne well by some, but, they are prone to lead to gastrointestinal fermentation. Milk, variously modified, eggs, fresh vegetables, and fruits are more or less staple articles, as also is bread, and these may be taken by most patients. In advanced cases, a rigidly restricted diet at all times is imperative. In all cases, the amount of alcohol, tobacco, tea, and coffee allowed

should be moderate, and doubtless the best rule in many cases is: "Not at all." Since a large degree of sclerosis is present in most persons after middle life, it is not wise or expedient to be extreme in the matter of diet, until our knowledge becomes more exact.

Incidentally, it may not be amiss to remind you that, in circulatory disturbances depending upon arteriosclerosis, nitroglycerin acts quickly, and may be employed for a long time without harm, its chief drawback being its evanescence. It rapidly causes dilatation of the peripheral vessels and, if pushed sufficiently far, will cause flushing of the face and headache. It not only relieves the overburdened heart, but, increases the activity of the kidneys. It may be administered, in appropriate cases, in doses of from 1-50 to 1-100 grain every two or three hours for long periods, without producing injurious effects.

The present writer intends to study this problem at greater detail in the near future and to incorporate it in an article to be published in these pages.

QUERY 6425.—"Albuminuria in Pregnancy." G. P. D., Illinois, sends in a specimen of urine, with the following explanatory letter:

"This is taken from a 24-hour specimen. The total quantity for twenty-four hours was 4 pints. I have not examined this specimen; but, two weeks ago, the urine seemed to have a trace of albumin (nitric-acid contact) and a specific gravity at that time of 1008. Its color was like that of the specimen sent you. Day before yesterday, the specific gravity was 1020 and seemingly there was no albumin.

"History of the case: In 1916, the woman became pregnant, when she was both-

ered a great deal by swelling of the legs and feet, but, did not let us know of it at the time, thinking this to be natural (she being a primipara). She carried the child to nearly term. The babe was born dead, and, as I believe, had been dead for several days. Recovery was slow. Albumin was present—very much so. The albumin ring appeared instantly. After several weeks, the people went out of my care. Now they are back again and we believe the woman to be pregnant, although not sure of it. Now I wish you would help me in whatever way you can and offer some suggestions. Supposing albumin appears early, should abortion be induced?"

Examination of the urine submitted does not show any distinct evidence of the existence of nephritis in the subject. Rather, we should be inclined to think that a low-grade cystitis obtains. Note the presence of many colon-bacilli of mucin, pus-cells, and many squamous epithelium; while albumin, casts and red blood-corpuscles are absent. The amount of urine voided certainly is satisfactory, although the urea output is distinctly low and there is some evidence of intestinal fermentation, indican and skatol being present in moderate amounts.

The mere fact that this woman gave birth to a dead child and, prior to that, had edema of the extremities, would not, in our opinion, warrant the induction of premature labor in a subsequent pregnancy. Naturally, the milder degrees of nephritis can be recognized only by the presence of albuminuria, although it is possible, of course, for one to have a considerable amount of albumin in the urine without there being any definite inflammatory changes in the kidney.

In the socalled kidney of pregnancy, we have symptoms of subacute nephritis coming on during the later months and persisting throughout the pregnancy, and passing off after delivery, not to recur. So, also, we may encounter the relapsing type, in which albumin and casts are found during the early months of pregnancy, these disappearing after delivery, but, reappearing with each subsequent pregnancy.

When a woman suffering from Bright's disease becomes pregnant, it is more than probable, of course, that the condition will be aggravated and that thus a local edema may go on to general anasarca; when the amount of urine voided diminishes stead-

ily, there is an increase of albumin, a higher specific gravity, and diminution in the total quantity of the urea; the digestion becomes disordered, and headache, vomiting, disturbance of vision, drowsiness, and ultimately, twitching of the muscles or the limbs, progressing to actual convulsions, and ending in coma and death. During some stage in this sequence of events, the pregnancy probably will terminate prematurely, usually preceded by the death of the fetus.

Eclampsia is not especially liable to occur in true Bright's disease, being more commonly found in association with the kidney of pregnancy. In the relapsing form (so called), of nephritis, the symptoms very closely resemble those of true acute Bright's disease. They come on early and the fetus usually dies.

Where persistent albuminuria and other serious symptoms are observed, the question arises, of course, as to the advisability of inducing premature labor. On this point, there exists a wide diversity of opinion. In well-recognized, chronic Bright's disease, many writers recommend early abortion, in order to save the mother from the almost certain aggravation of symptoms and the possible aggravation of the disease. Others, again (and with whom the present writer holds), have come to the conclusion that, in chronic nephritis, pregnancy should be artificially interrupted only in the interest of the mother, when, despite suitable treatment, the symptoms of the disease grow worse or, even, when they fail to improve. Naturally, if the operation is to be successful, it must be undertaken before the mother's condition has reached such a state that there is almost complete suppression of urine and uremia is threatened.

In nephritis owing to pregnancy, all symptoms arise, as a rule, in the later months, and the induction of labor is seldom required; in fact, very competent obstetricians insist that labor should never be induced because of the kidney of pregnancy, inasmuch as the operation is more dangerous than the eclampsia itself. If, however, despite any treatment, medicinal and dietetic (and the latter is most important), the symptoms steadily become more serious, labor may be induced, with advantage; for, in such cases, if the pregnancy is not terminated, the death of the mother is almost certain. And this view

is the more easily accepted when we remember that the fetal mortality amounts to 50 or 60 percent.

In this case we would recommend careful dieting, the administration of salines, and at least 2 grains of arbutin three times daily. It is an excellent idea to give, every week, a few small doses of blue mass and soda in the evening; and your patient should be instructed to take a salt- or, better, still, an epsom-salt sponge-bath every third or fourth day.

The condition of the pulse and blood pressure should be carefully watched, and it may be necessary to prescribe small doses of some active preparation of digitalis. This writer has observed excellent results from the use of scillitin (squill).

The patient's urine should be examined every ten or fourteen days. Should albumin appear in any appreciable amount, she should be placed upon an absolute milk-diet.

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QUERY 6426.—"Hysteria—Neuritis—Autointoxication?" W. S. C., Virginia, writes as follows:

"I am stumpt. Have a lady whom I shall lose to another doctor if I don't help her soon. Has been to three already. Her pulse is 130. After a full meal (she eats everything), a pain starts in the arm and centers around the base of brain. Pain terrible, shooting and darting as she expresses it. Loses her mind then and wants to fight, her husband says. Nothing wrong with kidneys—no swelling anywhere. When the pain comes, she acts like a woodchopper. I am giving her now, starting today, calcium iodized in 5-grs. tablets; elix. pepsin, teaspoonful after meals with 5-grs. doses of pepsin. Three times a day the elixir of 5 bromides with 10 drops tincture digitalis. Bowels are regular, tongue is clear. Blood pressure high. I cut out coffee and diminished the daily amount of snuff. I let her talk three hours today and when she paid her bill, told her I charged one dollar per hour—got \$3.00. Can you get anything out of my description?

Where does the trouble lie? I say, in the stomach. Help me if you can. As she is nervous, a doctor told her she may be paralyzed.

We are not sure that this is either neuritis or hysteria. In neuritis, there is evidence of local trouble, tenderness on pres-

sure, sometimes extreme hyperesthesia, while at other times there is a hypo- or anesthesia. The pain usually radiates along the course of the nerve, but, we do not remember having seen any description where the pain traveled to the occipital region.

Hysterical women are not usually large eaters, at least in public. They are more often apparently small eaters but "piece" in between. This patient is a large eater, and has a high blood pressure; also she seems to take snuff freely. Then, of course, there is a severe pain which seems to come after a full meal. Those are the only points to go upon. We are trying to get some connection between neuralgia in the arm and a nervous upset due to overeating. At least we assume that the lady eats too much. It would have to be determined whether there is a history of injury to the arm in any way, whether trauma or excessive muscular contractions, exposure to high degrees of cold or heat, that would help in deciding upon the nature.

As for treatment, means should be taken to reduce the high blood pressure, to control and limit the diet to the needs of her body and then to impress her forcibly with the ability of her physician to relieve her. Vibration, especially with a high-frequency current, undoubtedly would be of great benefit. Possibly injections of nuclein in the painful arm twice a week, 1 mil would help, partly through direct action, partly owing to their moral effect.

In our opinion, there is an hysterical element included in this case, but how large an etiological factor it is we can not say.

By the way, the doctor makes a mistake if he lets off his patients for \$1.00 an hour. \$2.00 for every half hour would be more like it.

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QUERY 6427.—"Treatment of Catarrh." W. A. B., Iowa, has been troubled with catarrh for years and it has become chronic. He desires to know whether any relief can be secured by the use of catarrhal vaccines, and asks for any other suggestions in the way of treatment. The parts affected particularly are, the throat, head, and nose.

As you are well aware, the treatment of "catarrh" is one of the most difficult problems and rarely is successful and lasting

except in a minority of cases. The reason for this, though, we hold, is that but few (both, patients and physicians) have the required patience and persistence to continue the treatment for sufficient periods of time. Given an organism in a fair state of health, or the health of which can be restored to normal, and there is absolutely no reason why a catarrhal condition of the upper air-passages should not be relieved, provided suitable measures are taken.

One error that is committed frequently is, that patients do not realize the intimate connection existing between "catarrh" and the general health; also between "catarrh" and possible foci of infection in tonsils, tooth-sockets (pyorrhea) and elsewhere.

The important point is, to discover everything that is abnormal, to correct all anomalies, to accustom the body to a perfectly correct mode of functioning; after which local measures undertaken for the relief of the local trouble can be successful, while otherwise they must be limited in their effect.

As to the question of vaccines, it is to be said at the outset that, frequently, they have a very satisfactory action. However, the action of a bacterial vaccine is exerted primarily only with regard to the related infection, the body cells being trained to resist the respective microorganisms, to destroy them and to neutralize the toxins formed by their disintegration. Mechanical, structural changes in the tissues, that are due to the action of these bacteria, are not restored to normal through the direct effect of vaccines, although a favorable in-

fluence may be exerted secondarily, by virtue of an inflammatory reaction that can be produced, by proper dosage, in the affected area and which may give rise to a socalled healing inflammation.

With these points in view, we wish to say that a bacterial vaccine by all means may be employed for the relief of your trouble. This should be selected with a view to cover, as nearly as possible, the bacteria that are present in your expectorations. Indeed, we are inclined to give preference in certain cases to autogenous bacterins, prepared from the secretions of the patients for whom they are intended.

At the same time, however, mechanical, local treatment should be instituted, making applications of healing, soothing and stimulating drugs to the inflamed or catarrhal surfaces, whereby the specific action of the bacterins (vaccines) may be enhanced and promoted.

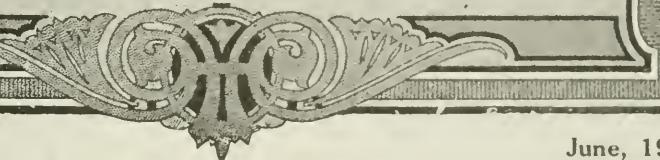
Finally, the state of the organic functioning should be investigated, tonsils must be examined, as also the tooth-sockets, any existing irregularity and anomaly must be corrected. And, by close attention to all these various points, it often is possible to lead a person afflicted with catarrh, no matter of how long standing or how severe, to a satisfactory condition of health. If it is you, yourself, who are so afflicted, it would undoubtedly be best to place yourself in the hands of a competent specialist who also has retained his interest in general medicine, and to persist in the treatment instituted by him, for months or for years—if this be necessary.

"*A MAN without a policy, without a definite purpose, without a strong conviction of any kind, who believes a little of everything and not much of anything, who is willing upon pressure to relinquish his opinion on any idea he has conceived, whether it be feasible or not, who does not hold on to any one thing tenaciously, will never accomplish much in this world.*"—Success.

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Dependable Therapeutic Fact for Daily Use



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Our Vacation Number

"THE bow can not possibly stand always bent, nor can human nature or human frailty subsist without some lawful recreation." This wise and true saying of Cervantes is representative of many that have been voiced by writers, philosophers, physicians and teachers. Bishop Hall declares that "recreation is intended to the mind as whetting is to the scythe, to sharpen the edge of it, which otherwise would grow dull and blunt,—as good no scythe as no edge."

Time was, a generation and more ago, when vacations were deemed to be the prerogative of the wealthy, when it was believed that the majority of people did not stand in need of vacations and, anyway, that they could not afford them. At present, the more sensible opinion has gained ground that workers, especially brain workers, can not afford not to have a vacation. A too continuous and unvarying devotion to one's round of duties is prone to dull the edge of the intellect. Personally, the present writer has not been much in the habit of indulging in vacations,

although theoretically cordially in favor of them. Still, for many years he has promised himself a long vacation—some day. There is a lot of fun to be gotten by looking up trips and planning them out whether they materialize or not.

However, we are taking it for granted that most readers of CLINICAL MEDICINE see the wisdom of unharnessing occasionally and of loosening the bow lest it lose its elasticity. Certainly, it is evident that many physicians are in accord with our opinion, for the response to our request for suggestions and pointers has been generous. More physicians have contributed to this number of CLINICAL MEDICINE than are wont to do when we ask for information on medical subjects. Is it because play-time appeals to us more than do the hard work-a-day topics? Perhaps so. Somebody said that men are but grown boys, and sometimes we feel as though we were not grown yet, even though the beard is gray and the head is bald.

The question of where to go and how to spend one's vacation admits of many

answers. We believe that a vacation spent in some clinical center, in postgraduate study and walking the hospitals, is not a good idea because the mind, wearied from the everlasting round of duties through winter and spring, is permitted no rest such as can be secured from a change of occupation, from a change of ideas and impressions. The most useful and beneficial vacation, undoubtedly, is one in which we learn over again how to play. Many of us have forgotten and may have to go to school to the youngsters for instruction.

The idea of enjoying vacation time by taking an automobile trip appeals to us as particularly happy. The freedom from time tables and traveling restrictions, the independence of action, the happy, careless meandering along the highways and byways that is possible in a private conveyance assures a degree of enjoyment and of recreation that can not be obtained by railroad travel that always is wearysome.

The question where to go is answered, in a great many different ways, in another department of this issue and is talked over fully. Some regions of Michigan, of Wisconsin, of Colorado and, of course, California, are described most attractively and temptingly. Strangely enough, none of our correspondents have referred to the National Parks which, to us, seem to provide the most tempting itineraries that can be devised. The Superintendent of Documents, at Washington, D. C., has for sale, at small cost, a portfolio describing the National Parks that was published by the Department of the Interior and describes the wonderful scenery that is made available to the public through the action of the government in setting aside certain regions, particularly of the northwest, for public use and enjoyment. We all have heard of Yellowstone and the Yosemite National Parks. There are many more which evidently would form objective points of vacation trips for several years.

Of course, the where, how, and when of enjoying a vacation must be answered in accordance with one's personal preference, and also with reference to one's duties and resources. The present writer must confess that, in the heat of summer, Chicago is not a bad place to be in. He has promised himself an honest-to-goodness vacation this coming winter when Chicago and all the central states are im-

prisoned by the ice king, when snow, and rain, and slush make walking and riding difficult, and when one's ageing bones are "honing" (as the southern darkies say) for the gentle warmth of the sun. Then he would like to go south, to Florida or Cuba, or, then, to southern California. Whether this plan will be carried out or will miscarry, time will tell. However, we hope sincerely that all the interesting and attractive descriptions printed about physicians' vacations will be of service to many of our readers, and we wish you all, including the wives and the kiddies, a very happy and enjoyable vacation time.

Play is the great harmonizer of the human faculties, over-strained and made inharmonious by labor. It is the agency that keeps alive and in healthy activity the faculties and sympathies which work fails to use or helps to repress. It is the conservator of moral, mental, and physical health.

—J. G. Holland.

"SEE AMERICA FIRST"

From the many contributions to this number of CLINICAL MEDICINE, describing automobile vacation trips all through this wide land of ours, one fact impresses itself insistently upon us. This fact is, that, in order to satisfy our desire to travel and to see other places, it is not necessary to go to Europe, or Asia, or Africa, or even to South America. In our own United States, nature has provided a wealth of beautiful places, from the highest mountain peaks and mountainous scenery, through wonderful lake districts, inland farming countries, hills, deserts, to the sea shore which itself shows as many variations as may be found anywhere between the northern latitudes and the semi-tropical zone. Some of the stories recounted in these articles are so attractive as to call us urgently to go and do likewise. The mountains beckon, those wonderful lakes attract us, but, so does the seashore with the ever-moving, mysterious, and fascinating ocean.

If we like to travel, who would want to go to Europe, at the present time, when the countries in that continent barely are commencing to recover from the effects of the vicious and cruel onslaught of Mars? As for the mysterious far east, or the sun-baked veldt, or even the countries of the Incas and other Central and South American lands—those are all right for the globe trotter, or for the man who has

oodles of time and money. To the physician who has but a few weeks at his disposal, who is obliged to count the dollars that he spends for recreation, however necessary that may be, the home country offers as good and better opportunities for seeing different places, for visiting interesting localities, for having new and stimulating experiences and for gaining helpful and entertaining impressions that will last him for years to come. By all means, let us see America first. Let us know, and admire, and appreciate our own country before we go far afield.

Another thing, we have been rather chary with those comments that we often append to articles that are printed in CLINICAL MEDICINE. The fact is, there was so much to be commented upon—always appreciatively—that we were afraid to start lest we be carried so far as to occupy an undue share of the available space. If we have not added any comments of approval at the end of individual articles, that is not because we do not feel it. We think that this June issue of CLINICAL MEDICINE is a wonderful number and a very interesting one. It encourages us to plan for another number like it, one year from now.

Man was made to enjoy as well as labor, and the state of society should be adapted to this principle of human nature.

—Channing.

SOMETHING ABOUT VACCINES AND BACTERINS

Much unfavorable criticism is indulged in occasionally by physicians, some of whom will not take the trouble to think, while others, it is to be feared, simply are ignorant of the actual facts concerning the custom of protecting children as well as adults against the acquirement of smallpox by vaccination and, likewise, by inference, concerning the use of vaccines and bacterins in general for the purpose of producing a specific immunization against other infectious diseases. By such, it often is asserted that vaccination has not diminished the frequency and severity of smallpox and that, in short, bacterial immunization is not justified at all.

While much could be written on this topic, we only wish to refer to a report submitted by Doctor Fasquelle to the French Academy of Medicine, as cited in the *Ga-*

zette des Hôpitaux for March 29 (p. 266). In his report, Doctor Fasquelle discussed the antivariolar vaccination in the French Army, referring to the fact that, in 1870-71, more than 125,000 French soldiers were ill with smallpox, of whom 25,000 succumbed to the disease. Now, during the Great War, that lasted more than four years, the metropolitan French Army had a sick-list from smallpox of but twelve cases, only one single one of which terminated fatally. In the discussion of this report, Doctor Roux pointed out that, for the first time in history, a war was not accompanied by an epidemic of smallpox.

It seems to us that comment is entirely unnecessary and we content ourselves with reproducing the fact as reported by our French contemporary.

IS CINCHONIDINE THE MOST USEFUL ALKALOID OF CINCHONA?

Associated with the undoubted specific action of quinine, in malaria, there are various untoward effects that often make it impossible to employ that drug. Indeed, it happens very frequently that the physician is requested, at the outset, not to prescribe quinine, the patient declaring that he, or she, can not take it without being seriously distressed.

In the *Indian Medical Record*, for March, Dr. E. S. Pushong enumerates these untoward effects of quinine as follows: violent urticaria with incessant vomiting; syncope; scarlet rash, resembling scarlet fever; violent diarrhea; uterine hemorrhage with severe pain; tetanic convulsions; optic disturbances with nervousness.

By a curious coincident, Doctor Pushong had an opportunity, in 1897, to make comparative tests of the actions of several salts of cinchona. An order had been given to destroy considerable quantities of cinchonidine, cinchonine, quinatin and quinidine that were in stock in the medical store department of the Military Hospital at Lucknow. Instead, these stores were transferred to the railway dispensary, with the request that comparative notes of the actions of these drugs be made.

It was found, on clinical test, that equivalent doses of cinchonidine sulphate were quicker in action and more effective in controlling the malarial symptoms than

were those of quinine sulphate. Doctor Pushong has continued his comparative tests since that time and experience confirmed the first observation that cinchonidine and its salts (the sulphate and the muriate) have all the virtues of quinine but none of its drawbacks.

In a case cited by way of illustration, the patient, a young girl, was said to be affected with violent vomiting and urticaria whenever she took quinine. The muriate of cinchonidine failed to produce these symptoms, while the condition of the patient greatly improved. Unfortunately, or, for the sake of experiment, fortunately, the druggist, on renewing the prescription, supplied the sulphate of quinine, with the result that vomiting and urticaria made their prompt appearance. On cinchonidine being again supplied, these symptoms ceased and the case ended in complete recovery within ten days.

This is a remarkably interesting observation and may be utilized in eliminating the unfortunate contraindications that sometimes exist to the use of quinine. Textbooks of therapeutics usually pass over cinchonidine somewhat casually, Hare, for instance, saying merely that it is very useful in influenza, combined with salicin or one of the newer salicylates. If Doctor Pushong's observation can be confirmed by other physicians, it may result in making the benefits of cinchona medication available for a wider range of application.

Pleasure's the only noble end
To which all human powers should tend;
And virtue gives her heavenly lore,
But to make pleasure please us more!
Wisdom and she were both design'd
To make the senses more refined,
That man might revel free from cloying,
Then most a sage, when most enjoying!
—Moore.

THE VOLUNTEER MEDICAL-SERVICE CORPS

A few months ago, on March 14, to be exact, the final meeting of the Central Governing Board of the Volunteer Medical-Service Corps took place. The president, Dr. Edward P. Davis, on that occasion, paid tribute to the patriotism of American civilian doctors in their responding so generously to the call for application to be enrolled in the Volunteer Medical-Service Corps. Of 70,000 applications received, 56,540 had been acted upon

prior to the signing of the armistice. All records, it was decided, are to be turned over to the library of the Surgeon-General of the Army, where, in the future, they will be accessible for information. In this manner, the Surgeon-General is in a position to secure information concerning all able-bodied eligible physicians of the country, thus enabling him to call upon their services for any emergency that later may happen to arise.

At this meeting, it was pointed out—justly, we think—that the physicians who remained at home did fully as good and patriotic service as did those that had volunteered for service in the Medical Corps of the Army. The medical work at home was unusually onerous, not only because of the prevailing severe epidemics of influenza and pneumonia, but, also, because the great majority of trained assistants and nurses had been called away for war service. In consequence of this, the duties devolving upon the home doctors were exacting and their responsibilities correspondingly great.

The Volunteer Medical-Service Corps, itself, has accomplished, actually, a valiant service during several emergencies, and it is being continued, even though in a latent form, as a matter of policy and expediency.

TRIBUTE TO A DEVOTED NURSE

In the last five years, more than ever before, have we become conscious and convinced of the complicated machinery that constitutes the medical service of a country, and still more of an army. When we speak of the medical profession, it is not correct to include only physicians and surgeons. There are many others whose activities and devoted aid are indispensable for successful service. Among those factors that are most likely to determine success or failure of medical service is, the nursing aid that physicians and surgeons have available, and the time has passed long since when the nurses, with all their problems and trials, and their duties, could be considered other than as a part of the great efforts comprised under the designation of medical service.

Not only in the war but in the home-land the work of nurses, in the last few years, has been wonderful and devoted to a degree that is hard to realize. At home

we are accustomed to it. In the war zone it was more or less of a new departure. However, the great war has shown that, in periods of storm and stress, the nurses can be counted on to do their share as fully as can any doughboy or gob, any officer or official. They have done remarkable work and this work was carried on mainly under the leadership of Miss Jane A. Delano who gave the best she had during the entire period of war, as she had done during her whole life. Finally, she gave her life, as a representative of the nursing sisterhood. It is meet that the memory of this remarkable and self-sacrificing woman be honored.

Miss Jane A. Delano, who died April 15th, at Base Hospital No. 8 at Sauvigny, France, was one of the foremost figures in the nursing world. It was under her direction that more than 30,000 nurses were recruited through the American Red Cross for service with the Army and Navy after the United States had entered the great conflict. She was born in Watkins, New York, in 1862. Her father was killed in the Civil war and she was reared by her grandfather, a Baptist clergyman.

The call to relieve suffering humanity came to her while still a young girl and, after preliminary education, she began fitting herself for the career in which she was destined to attain such great prominence.

Miss Delano graduated from Bellevue Hospital, New York, in 1886 and two years later rendered her first patriotic service to her country by volunteering to nurse yellow-fever victims in Jacksonville, Florida.

Although, at that time, medical science had not decided that the mosquito was a yellow-fever carrier, Miss Delano already had reached that conclusion and had insisted on the use of mosquito netting by her nurses, with the most satisfactory results.

Her work in Jacksonville finished, Miss Delano was called to Bisbee, Arizona, in 1889, to establish a hospital for one of the big copper companies. Two years later, she was made superintendent of the nurses' training school of the University of Pennsylvania, a position she held for five years. Special courses in philanthropy and medicine further increased her knowledge and, in 1900, she returned to Bellevue

Hospital to direct the nurses' training school there, continuing in that capacity until 1905.

When the American Red Cross, following the reorganization in 1903, entered into an agreement with the American Nurses' Association for the purpose of developing a nursing reserve for the Army Nurses Corps, Miss Delano was appointed chairman of the committee in charge of the work.

She was also appointed superintendent of the Army Nurse Corps, by the Surgeon General, in which capacity she visited the Philippine Islands, China, Japan and Hawaii. Owing to her untiring effort, 8,000 carefully selected nurses were available for government services, at the time the United States entered the war, and her leadership was largely responsible for the success of the recruiting campaign for nurses which followed.

Miss Delano served the American Red Cross from first to last without compensation—she was a full-time volunteer.

Relaxation is a physical and moral necessity. Animals, even to the simplest and dullest, have their games, their sports, their diversions. The toilworn artisan, stooping and straining over his daily task, which taxes eye and brain and limb, ought to have opportunity and means for an hour or two of relaxation after that task is concluded

—Horace Greeley.

MILK FOR INFANTS AND CHILDREN

The various investigations conducted under the auspices of the Children's Bureau of the United States Department of Labor have disclosed conditions that are serious, to say the least, and certain to react unfavorably upon the small children of today and thus upon the men and women of tomorrow.

A recent report on the New Orleans milk-situation indicates that children are not getting as much milk to drink as they require for healthful development. Indeed, in the city of New Orleans, the amount received by the children actually is less than it is in Baltimore and in Washington City, the other two cities studied. Seventy percent of the children under eight years of age that were not breast-fed were not getting any fresh milk at all. Only 20 of the 413 children between 2 and 7 years of age, that were included in the study, were drinking as much as three cups of fresh milk a day, which is the nominal

amount indicated by the Children's Bureau as desirable for such children's physical welfare.

It appears, further, that only 63 percent of those babies under two years of age that are not nursed by their mothers are given milk to drink, instead.

This is a condition of very serious import, because not only are the children deprived of the best and most nourishing food for normal development, but, they are being given directly injurious substitutes in its stead. For, often they drink tea or coffee in the place of milk, when, for very small children, this practice necessarily is certain to have unfavorable consequences.

When it is recalled that most of the 211 families studied were of about the same economic status, living on 20 dollars a week, or less, it must, of course, be taken into consideration that the price of milk is an important factor in its utilization. While this price has increased by 63 percent in the last five years, it must be pointed out that, nevertheless, milk still is a cheap food, whether it retails at 16 cents, as in New Orleans, or at as high as 20 cents a quart, as in other southern cities. Without consideration of the price, milk is the least expensive food, because it contains all the elements essential to growth; and the substitution of other foodstuffs and drinks, which all too often are not food-drinks, is a dangerous custom that necessarily must have serious consequences in the future.

It is to be hoped that official or private action will be taken in this matter and that the obtaining of a sufficient supply of fresh and clean milk, at least for babies and children, will be assured at a price that is within the resources of the working-classes of all strata of the population.

THOSE COALTAR PRODUCTS

In an editorial entitled "The Bugbear of Coaltar Products" (this journal, April, p. 252), creosote was included among the derivatives of phenol and, hence, coaltar products that are prescribed readily by the very men who condemn the use of coaltar products.

Mr. B. L. Maltbie, of the Maltbie Chemical Company, calls attention to the fact that U. S. P. creosote is obtained from

woodtar and that creosote from coaltar never is used in medicine.

We are glad to modify our statement in accordance with Mr. Maltbie's correction, in so far as medicinal creosote is derived from woodtar. True, it consists of phenols and phenol derivatives, chiefly guaiacol and cresol, which have essentially similar antiseptic actions resembling phenol. Phenol itself is hydroxybenzene obtained from coaltar or made synthetically, so that a close relationship exists between the phenols of creosote from woodtar and those derived from coaltar.

However, Mr. Maltbie is perfectly correct in stating that creosote from coaltar should not be employed in medicine, because of its undoubtedly irritant properties.

A man would have no pleasures in discovering all the beauties of the universe, even in heaven itself, unless he had a partner with whom he might share his joys.

—Cicero.

THE QUESTION OF WORKMEN'S HEALTH-INSURANCE

Ever since the Bismarckian "krankenkasse" was established, for the benefit of German workmen—but which operated to the serious disadvantage of the German medical men—and still more since Lloyd George inflicted upon the British workman and physician his panel-system of health-insurance that, though working well in some respects, yet, satisfied neither workmen nor physicians, there has been, in our own country, a persistent pressure to bring about analogous legislation. Especially amateur philanthropists and many people that know nothing about either the needs of the workers or the problems of the medical profession have persisted in tinkering with many health-insurance methods and which were submitted, more or less successfully, to legislatures in several states of the Union.

In nine states, legislative commissions have been studying sickness-conditions with a view to the framing of health-insurance laws. The reports of these bodies are unanimous in showing appalling annual-wage losses, inefficiency, and dependence owing to illness, while medical facilities within the reach of the sick wage-earner are everywhere conspicuously inadequate. The Ohio commission arrived at the conclusion that the only just and ef-

fective solution of the problem is, health-insurance legislation.

However, those bills that thus far have been proposed for adoption, while some of them are calculated to prove of marked advantage to the wage-earner, are as often grossly unfair to the physicians, in whose case the altered economic conditions of most recent times seem to have been left entirely out of consideration. Workmen in almost every industry have insisted upon, and have received, a substantial increase of their wages. Provisions, clothing, and all things needful for life command prices about sixty-five percent higher than a generation ago. Yet, the physician's fees in most parts of the country still are the same as they were then, while his expenses have been seriously increased, not only those incidental to the securing of a medical degree and license to practice, but, those for maintaining a position suitable to the social standing of the medical profession.

In spite of these facts, most of the health insurance bills proposed blissfully ignore the needs of physicians, who appear to be expected to give their services at a merely nominal cost and in return for an income entirely inadequate to meet their living expenses.

It is very true that much may be said in favor of workingmen's health-insurance, for the reason that, under present conditions, the working people are sadly improvident, many of them living up to the last penny of their incomes and then, if sickness overcomes them, entirely unable to meet the costs. If legislation of this kind could be worked out with proper fairness both to the insured working-man and the medical profession, whose members, after all, are important factors in the problem, physicians would have no reason to object; indeed, they would gladly cooperate in any undertaking and legislation in which their just claims were considered with fairness.

There is before us a correspondence emanating from the American Association for Labor Legislation and referring to the workmen's health-insurance bill recently passed by the New York Senate.

The purpose of this bill is, to conserve the health of the workers, by establishing, under state supervision, funds jointly supported and managed by the employers and employes and out of which workers in

time of temporary sickness will receive benefits both in cash and medical care. These benefits include a cash payment of two-thirds of the regular wage, up to \$8 a week, to be granted during temporary illness or extended disability not covered by workmen's compensation; also medical and surgical treatment and supplies, hospital service, nursing attendance and dental care, and, in the case of death, a burial-benefit of \$100.

What appeals to us as truly meritorious legislation is, the special proposition for maternity-benefits. Working mothers and wives of working-men that are insured will be given prenatal care and adequate medical and obstetrical and nursing-care at childbirth. For wage-earning mothers, there is provided, in addition, a cash maternity-benefit for two weeks before and six weeks after childbirth, in order to permit them to stop work for this period.

By making the health-insurance system universal, with all profit-taking casualty companies eliminated, the cost to the insured workers will be only about 20 cents a week in order to insure the full cash and the medical benefits. Employers, who share equally with the workers in the cost, have figured that their share will be about one percent of the payroll.

Of interest to physicians, is, the proposition that this law does not limit the choice of physicians, but, permits the insured workman to call upon any physician he may choose, for his services. Indeed, it is said that the bill, as passed, was amended to meet suggestions from the medical profession, designed to safeguard their ethical and economic interests.

Before accepting this statement, that the bill as passed was amended to meet suggestions from the medical profession, we should have to be satisfied as to the nature of these suggestions; for, possibly, it might make a difference as to who was responsible for them. If they are made from the viewpoint of the "leaders", while academical to a considerable degree and no doubt highly elevated and ideal, they nevertheless may not meet the needs and wishes of the rank and file of the practitioners.

It is the general practitioners—in the cities, in the smaller towns, and in the country places—whose economic and social welfare has to be deferred to, just as much, and more, as must be that of the working-

man who very often is better off financially than is his medical adviser.

Frankly, we can not but entertain serious doubts as to the consideration shown to the opinion at large of physicians who, unfortunately, but rarely take the time from their work of attending the sick people to guard their own interests or even to instruct their representatives in the legislature.

We shall anxiously watch to see how this workmen's health-insurance works out in practice. It is futile to close our eyes to the inevitable coming of similar legislation throughout the country. The point at issue is, that, in every instance, physicians should, through a proper committee of their state medical societies, guard the interests of the medical profession, as, indeed, has been attempted more or less successfully, in, for instance, Illinois, as also in Wisconsin and in several other states.

The times are gone by when physicians were able to devote their entire exclusive attention to their professional work. It is obligatory upon them now to take part, an active part, in the political life, in the public activities of their municipalities and states and to interest themselves in those measures that are enacted by their state legislatures for the benefits, or otherwise, of their respective communities.

The end of pleasure is to support the offices of life, to relieve the fatigues of business, to reward a regular action, and to encourage the continuance.

—Jeremy Collier.

SOME LEGISLATIVE TINKERING

Various, nay, numerous bills purporting to bring about favorable conditions for the masses as to health-insurance, sick-benefit, the assurance of medical attention to the sick, and so forth, are being inflicted upon the legislative bodies of almost every state in the Union, like a visitation of locusts. These bills are designed to insure for the working-man adequate health protection and, incidentally, as in the case of the bill that recently was passed by the New York State Senate to diminish the losses to the employer through inefficiency, because of sickness or ailments among their employees. In most of these bills, the interests of the working-man are guarded most beautifully, while, as a rule, the physicians are the "goats," being expected to do all the actual

work of restoring the patients to health, but, at a rate of remuneration that actually amounts to starvation-wages.

We have here an evidence of an unfortunate tendency in lawmaking procedures that are fondly believed to be in line with socialistic ideals, yet, which, it is feared, will ultimately work out to the disadvantage, not only of a certain class—the physicians—but, to the discouragement of initiative, of the exercise of brains, and of progress.

Moreover, in this and in similar legal enactments, the government or the municipality usually assumes a portion of the burden, but, which can be carried only by appropriate taxation. It is not the state or the municipality that pays the bills, but, it is the taxpayer; and the taxpayer is, of course, the working-man as well as the individual member of the middle class; the latter being affected far more seriously than anybody else.

Legislation such as that procuring health-insurance for the working-man amounts to the placing of the burden of the weak and incapable upon the strong and capable. It penalizes knowledge and strength and encourages ignorance, weakness, and sloth. That is why we maintain that, in its ultimate effects, laws of this kind will tend to discourage progress. Ultimately, through indirectly increasing the cost of living and the taxes, bankruptcy of the municipality as well as of the middle and the mercantile classes threatens, with resulting encouragement of the proletariat; an outcome that hardly can be contemplated with equanimity, in view of conditions at present prevailing in Russia.

We do not believe that all difficulties of the body politic and of social life can be solved by legislation. That effort impresses us as a mere makeshift and as a lazy avoidance of actual responsibility. It amounts to the pauperization of a class of people that originally are highly self-respecting and respectable, in their sturdy independence and their proud adherence to their work and duties. We have evidence of this in some of the evil outcroppings of unionism, which deteriorate the quality and quantity of the laborer's output, by assuring the same wages to the inefficient as to the efficient workman. The shortsighted policy of attempting to force people to be good, by passing laws, by no means is

progressive, but, rather, reactionary, in that it creates a paternalistic government.

It would be much better, instead of all this law-tinkering, to see to it that the masses, more especially the working people, were accorded an opportunity to educate themselves and their children in a true direction, learning to appreciate, not only their privileges as citizens of the United States, but, also, those duties that fall upon them in that capacity. To take away all responsibility from a class, as well as from an individual, never yet has made for progress and healthy development; much rather it engenders shiftlessness, sloth, and laziness.

Above all, it is undemocratic, because grossly unfair, to pass laws by which representatives of one class are benefited greatly at serious cost to members of another class.

There is no reason why physicians should be imposed upon, why they should be forced to bear the burden of the working class; and attempts to force them to this must result in a depreciation of the ability of physicians to accomplish the good of which they would be capable under favorable circumstances.

Pleasures lie thickest where no pleasures seem;
There's not a leaf that falls upon the ground
But holds some joy of silence or of sound,
Some sprite begotten of a summer dream.

—Blanchard.

THE U. S. INDIAN MEDICAL SERVICE

One of the stepchildren of the United States government is, the Indian Medical Service which is charged with the important task of caring for the health of the government's wards on the Indian reservations. We hardly ever hear of this service; the physicians belonging to it do their work quietly, unassumingly, forgotten apparently by everybody and, certainly, sadly neglected. It may be well and instructive, also it may arouse us to a consciousness of the wrong that is being done to many good and efficient, hard-working and conscientious men, to read and take to heart some of the information that we have received through a friend and which is submitted in the following.

The U. S. Indian Medical Service was composed of the following number of medical officers in 1917: 3 medical supervisors, 7 ophthalmologists, 130 agency

physicians, 7 field dentists, 6 field nurses. For the fiscal year 1917, \$350,000 was appropriated by Congress for health work in the Indian department. A large number of hospitals are operated by the Indian Medical Service. The medical supervisor spends most of his time in the field, the official desk at Washington being held down by a medical clerk.

Dr. Ales Hrdlicka, Curator, U. S. National Museum, in an address delivered before the Mohonk conference said, "The regular Indian service physician gets from \$1,000 to \$1,600 a year, a large majority getting \$1,000 or \$1,200. He has also the housing, light and heat. But, this physician has none or but little prospect of advancing, either in his position or in his salary. He may stay in the Indian service at one place for five or six years, or ten years, and, then, he will be practically in the same position as he was at first. There is nothing before him to strive for, or to hope for."

"Here is a man who has graduated perhaps from one of our best medical colleges at great expense. He accepts a position in the Indian service without suspecting its disadvantages. He is located in a far out-of-the-way place where he is completely devoid of the beneficial and necessary contact with fellow physicians, especially with those with whom he could consult and whom he could call upon for help in serious difficulties. He is not only out of contact with his fellow physicians but he is almost out of contact, in many cases, with civilized humanity in general. He has to deal with a class of people whom he cannot understand, except imperfectly through an interpreter, who do not understand him and who are not used to white man's ways, least so in medicine. There will be many difficulties; the practice is very unsatisfactory; he will let conditions drift if he cannot control them, and there are other conditions and restrictions on him which will further prevent his mastering the field. Just think of what will become of a man placed under such conditions, within a few years. There is little before him, but, some opportunity to find practice among the surrounding whites and to work himself up out of the Indian service."

"If the physician wants a vacation, he must get a leave of absence, but he has

to pay a substitute who will take his place during that time. And there are other disadvantages. These conditions, and I have touched upon them but superficially, are exceedingly unfavorable, and so long as they will exist there cannot be expected a highly organized medical service, a service which should be one of the most important agencies for the civilization of the Indian, for, as among us, the medical man reaches the very heart of the Indian family." This state of affairs does not work for the advantage of anybody.

The *Indian Medical News* publishes the following from Government documents; under the title of "Recommendations Made by the U. S. Public Health Service That Appeared in Document No. 1038, 62nd Congress, 3d Session." On account of limited space, we are unable to do more than quote several extracts from this document: page 83; "The physicians to the Indians should be so organized as to insure adequate medical and sanitary supervision on reservations and at boarding schools. Only competent men should receive appointment, and the compensation should be sufficient to retain their services. Unqualified men should not be retained. In medical and sanitary matters, the authority of the medical and sanitary officers should be, in a large measure, independent of agency superintendents—and there should be located in a central bureau plenary powers in respect to all medical and sanitary matters among Indians." Regarding the work of Service physicians, we quote as follows from the same document: "Physicians conducting the work on many of the reservations see no encouragement, their life is isolated, their pay small, their hope of promotion less, and their authority to attack the real problems limited. Under such conditions, it would be surprising if any, except the genius, undertook to overcome the obstacles. Medical work must often be carried on in isolated localities and under adverse conditions, but among other governmental medical corps, the medical officers, by reason of definite organization and hope of advancement, are filled with enthusiasm and acquire an esprit de corps which is necessary to success in any great coordinate work. Under existing conditions, agency physicians, in medical and sanitary matters, are subordinate to

agency superintendents who are primarily interested in the preservation of Indian property rights, and so forth."

Some years ago, a letter from Ex-President Taft was published in the report of a former Commissioner of Indian affairs. Extracts from this letter will be of interest to many. Mr. Taft said: "The present conditions of health on Indian reservations and in Indian schools are, broadly speaking, very unsatisfactory. In many parts of the Indian Country, infant mortality, tuberculosis, and disastrous diseases generally prevail to an extent exceeded only in some of the most insanitary of white rural districts and in the worst slums of our large cities. On the Kiowa, Comanche and Apache reservations 71 percent. of the school children have trachoma. Of the 7,000 Indians of the Pine Ridge Reservations, S. D., over one-fourth have tuberculosis. As guardians of the welfare of the Indians, it is our immediate duty to give to the race a fair chance for an unmaimed birth, healthy childhood, and a physically efficient maturity. While there are many efficient and self-sacrificing physicians in the service, the smallness of the salaries, which average only \$1,186 a year, necessarily affects the qualifications and ability of the physicians engaged. The Indian medical service should therefore be substantially increased in size and should be lifted into efficiency through the better men whom, as a rule, only better salaries can command."

If the Indian Office would only invite the Public Health Service to reorganize its medical work and if laymen would consent to allow a medical officer to direct the work instead of trying to dominate it, then everything would look much brighter and an efficient medical organization could be formed. A U. S. P. H. S. officer should be detailed to the Office of Indian Affairs to direct this work for at least two years. Just now, the medical work of the Indian Service is under the educational division of the Indian Office. Many medical societies have passed resolutions asking for reorganization and improvement in the Indian Medical Service, among them the American Laryngological Association, Medical Society of the Philippines, Medical Association of the Isthmian Canal Zone, and so forth.

Leading Articles

An Automobile Pilgrimage in Retrospect

By GEORGE F. BUTLER, A. M., M. D., Wilmette, Illinois

Medical Director, North Shore Health Resort, Winnetka, Illinois.

"SWEET recreation barred, what doth ensure but moody and dull melancholy, kinsman to grim and comfortless despair; and, at their heels, a huge infectious troop of pale distempers and foes to life". Thus wrote Shakespeare. In the Spring of 1917, I had accumulated the whole "troop of pale distempers" and, likewise a new Haynes 7-passenger automobile. So, on the evening of July first, I and my family, together with our chauffeur—five of us in all—left Detroit on a boat for Buffalo, arriving there at 8 on the following morning. We immediately betook ourselves to our car, in which we were to live much of the time for the next four or five weeks, and motored to Niagara Falls. (Fig. 1.) After lunching, we viewed the Falls from all sides! A suffusion of color followed every flood of sunshine upon the tumbling waters, only to be succeeded by pale wafts of a colorless spray where a cloud caught the too eager sun within its soft eclipse. Niagara holds the eye, not less by its mass and power than by the exquisite beryl of its flood—a color that belongs to all the fresh-water seas of this continent. Niagara, the wonderful! I never tire of it! We loitered about the falls until late in the afternoon, when we drove to Avon, New York, where we put up at the Inn. The following day, we rode as far as Auburn, passing the charming hill-encircled Cayuga Lake, Seneca Lake, and the beautiful towns of Canandaigua, Seneca Falls, and Geneva. The next morning, we drove south, along the shore of Owasco Lake, to Moravia, my boyhood home.

If you have not been to the place of your birth since you were a boy, then return some day in an automobile with your

family and note your sensations. The hills will not appear to you nearly so high, nor the valleys so wide as once they did. You will drive around to your old haunts and recall with pleasure, and, perhaps with a little twinge of the heartstrings, how you used to go berrying up yonder hill where the blackberries grew purple in the shade, and how you used to fill up on green apples



Fig. 1. The Travelers.

and then walk into that same blackberry-patch and get covered with seed-ticks. Worldhardened, indeed, must be that man who returns to the scenes of his heartiest and most innocent pleasures without some echo of them awakening in his heart.

There is the same old apple-orchard where you mused beneath the pink and white blossoms. The apple-trees whiten in the springtime just as they did when you were a boy. There is no change in the transitions of nature. Yet, we never can be boys again! And, since we can not make the old impossible imaginings come true, we must do that which, within the

circle in which circumstances have placed us, is the best, the truest, and the noblest. It will be a pleasure for you to "go back home" and tread the paths where your footprints have been rained out for these many years; to grasp the hands of those who knew you as a boy. Not many of them are left; most of them are taking their ease in the quiet graveyard on the hill.

But, I am a man now, and must be on my way, so, with a warning blast, we speed past the big red schoolhouse standing just where it stood fifty years ago and drive north-east three miles up the road, stopping reverently at the farmhouse in which



Fig. 2. Doctor Butler's Birthplace.

I was born. (Fig. 2.) And then, good-by to the old home, perhaps forever!

Skaneateles Lake is one of the most beautiful bodies in the Empire State, and for miles we drove within a few rods of it into the quiet village of Skaneateles, then on into the busy city of Syracuse. However, we had enough of cities. We wanted the soothing and refreshing influence of the country; we longed for the public road. So, early the next morning, we were on our way north for Alexandria bay. "Allons! the road is before us!" And, what roads those New York State country roads are! As smooth and hard and even as city boulevards! One should tarry a day or two at Alexandria Bay, for, a number of delightful river-excursions may be taken among the Thousand Islands, and to the Canadian side of the St. Lawrence.

The road eastward to Ogdensburg was good for the most part. We were anxious to reach the Adirondacks and Paul Smith's on St. Regis Lake, a distance of some 146

miles from Alexandria Bay, so, we hurried on. For the first half of our journey, we kept close to the shore of the St. Lawrence, enjoying some magnificent river-scenery. Immediately after leaving Malone, our route continued through rugged country and we were soon in the heart of the Adirondacks. Once more, after an interval of over forty years, I was again breathing the tonic air of these mountains! Ah, the memories of those mornings of crystal and gold, with a tingle of frost in the air and a glory in the oaks and maples! But, on this July day, the foliage was green, sweet, and spiritual, a quality that the palette does not know of. I was invigorated and reassured, feeling the life-tides in the earth, and penetrated by the vital currents that have shaped creation out of chaos. Beneath me, were a thousand miles of rock and ninety-three million miles above me was the sun, giving life to everything. On all sides, were the "everlasting hills" and lakes. The whispering welcome of the woods, the undertone and overtone of insect-life, the woodbird's song, the water's gentle splash, all completed a major chord of happiness and I was both calmed and exalted; I was in a condition to dream epics. This country summons one to serenity and new life; one's grossness is etherealized; one stands nearer to the sun, in a purer air, where there is more oxygen in proportion to the volume than in the hollows where heavy gases linger, and here deep-breathing aerates the blood until it sparkles. There is a reason for high spirits in high places.

From Paul Smith's, we went to the town of Saranac Lake, the "metropolis of the Adirondacks". Here we found, built on the shores of five bodies of water, a thriving village of over 5,000 resident population. Within the village limits and close to the town, are Lake Flower and the incomparable Lower Saranac Lake—the latter styled by the Indians, not inappropriately, the Lake of the Clustered Stars. Then there are the Middle and Upper Saranac Lakes. Through these lakes and the Raquette River, one can, by canoe, travel to and through the Fulton Chain of Lakes, while, by motor boat, there is navigation from the village through a chain of eight lakes. Saranac River starts here.

Saranac Lake was of peculiar interest to me, as having been the home of Dr.

E. L. Trudeau, who did so much in combating tuberculosis. The Adirondack Cottage Sanatorium, which he founded, still occupies a commanding site in the village. This mountain resort was also the home, for some time, of Robert Louis Stevenson, and Mark Twain used to camp near by on the lower Saranac. The former homes and haunts of literary men are of especial interest to me. Merely riding in an automobile twenty-five or more miles an hour, looking at the road ahead or catching brief glimpses of the scenery on either hand offers no special pleasure to me; but, to stop in some picturesque spot or visit some place where a great writer, artist, musician or statesman lived, is an inspiration to me. If you are constituted as I am, plan your route in advance at the hand of a few facts, not only as to roads and taverns, but, inform yourself about the history and legends of the places that you expect to visit, places where noted men and women lived or now live, besides something about the geology, mineralogy, and botany of the section that you are to traverse. Thus, your trip will prove a thousandfold more interesting than if you aim only to cover space and see the trumpeted sights. And, by all means, if you paint or draw, take along a sketch-book, certainly, a camera. Moreover, if you have inner resources, you will enjoy your trip the better if you will go early in the season, as I did, before the crowd comes. By August you meet too many automobiles on the road and too many members of the socalled human race at the hotels and other stopping-places.

From Saranac Lake, we went to Lake Placid, the "St. Moritz of America", as it has been called. I never saw St. Moritz, still, I have seen some beautiful lake and mountain scenery. It may seem almost sacrilege to some to compare Lake Placid and Mirror Lake with Lake Louise in the Canadian Rockies, which I visited last season. Tears pricked my eyes at both of these places because of their intolerable loveliness. At Lake Louise, the scene was of a beauty too noble to be called intoxicating, and, yet, too sensuous to arouse me, from feeling and impression, to thought. The beauty of Lake Louise did not impress me so much as did its peacefulness. This was the something deepest interfused. Deeper and stiller than the lake itself, sweeter than the breath of its

pine-clad shores, more solemn than those awful heights above it, was the peace of that place.

But, for beauty, the Adirondack lakes and, particularly, Lake Placid and Mirror Lake are the loveliest that I ever have seen. (Fig. 3.) Into the waters dividing



Fig. 3. Scene on Lake Placid

these lakes, like roses dropped from their windshaken stems, are dropped three beautifully wooded islands known as Buck, Moose, and Hawk. On Hawk Island, at the foot of Mt. Whiteface, the late Bishop Potter had his summer home. At the head of Lake Placid, towers grim old Mount Whiteface, and, on the other end, the big McIntyre, the mighty Tahawus, the giant of the range, besides the lesser peaks, making up the wall of eternal rock which nature has girt about this garden-spot. What is any earthly trouble but a dissolving dream when one can rest amid such beauty!

However, we could not rest for long, so, reluctantly we bade farewell to these lakes,

to visit others also of rare beauty in this region. (Fig. 4.) Space permits me to write of but one of these—Lake George. Herbert Spencer said of this resort: "Lake George is the most picturesque thing I saw in the United States." The



Fig. 4. En Route to Lake George.

lake is 32 miles in length and, in some places, 4 miles wide. In it, like petals from some tree blossom, floating, as it were, on its placid surface, are scattered 365 islands. I could easily devote this entire account to a description of this picturesque sheet of water, its legend and history.

The missionary Father Jogues, who was brought up the lake, in 1642, by the Iroquois as a captive, probably was the first white man to see this body of water. In the Fort William Henry Hotel Park, are the ruins of Fort William Henry, (Fig. 5) and, near by, are the ruins of Fort George; and, one vividly recalls the Battle of Lake George in which General Johnson, with his army of volunteer farmers and Mohawk braves, defeated a larger force of French regulars, Canadians, and Algonquin Indians, in 1755. We were on historic ground and decided to visit Lake Champlain, the ruins of Fort Amherst, Fort Ticonderoga, and the Crown Point

Forts. There were other places of interest near by: Joshua's Rock, the home of the late Dr. Edward Eggleston, the author; Roger's Rock, the birthplace of Joseph Cook; Indian Kettles, and others, all of which could be reached in a short time over excellent roads.

About this region, there clings the charm of legend and romance; for, on the shores of Lake Champlain, stand some of the most impressive and interesting historic ruins on the American continent. One should not overlook the lighthouse at the extremity of Crown Point, erected jointly by the states of New York and Vermont, as a permanent memorial to Samuel De Champlain, discoverer of the lake. Before leaving this section, I must not forget to call attention to Au Sable Chasm, the "Yosemite of the East". While it is but a miniature "Yosemite", it, still, is most interesting and worth while visiting, if one chances to be in this neighborhood. (Fig. 6.)

From Lake Champlain, our route lay through historic Bennington and the Green Mountains of Vermont. This section will be of absorbing interest to one who recalls the early history of our country. In driving through Bennington, our attention was first directed to an imposing monument of William Lloyd Garrison, situated in a



Fig. 5. On the Site of old Fort William Henry.

beautiful park nearly in the center of the village. Nearby is the old Bennington Center Cemetery, where rest the bones of the pioneer settlers of the town and of nearly all the local participants in the Battle of Bennington. The Walloomsac Inn, said to be the oldest in Vermont, standing not far from the park, was built, in 1776, by Capt. Elijah Dewey. Almost

opposite, is the site of the First Congregational Church, built in 1806, near the site of the original First Church, in which were confined the Hessian prisoners captured at the Battle of Bennington. A large boulder marks the exact location where stood this church.

A little farther on, we pass, at the edge of the street, a marble pedestal surmounted by a bronze catamount of life-size, with a snarling face looking towards the famous Breckenridge farm. "It was on the Breckenridge farm that the Green Mountain Boys, under the command of Ethan Allen, repulsed the New York Sheriff and his posse of 700 men, who had come to take possession of the same, proving his previous defiant assertion that the "Gods of the Valleys were not the Gods of the Hills." It was on this farm "that the infant state of Vermont was born." The Green Mountain Tavern, or "Catamount Tavern", stood where now stands the bronze Catamount. It was here that Ethan Allen, after the battle of Lexington, with his brave Captain Seth Warner, mustered the Green Mountain Boys for the surprise and taking of Fort Ticonderoga, making memorable his demand for the surrender of that fortification "in the name of the Great Jehovah and the Continental Congress!" Visit the elevation upon which towers the Bennington Battle Monument, the highest Battle Monument in the world, rising 308 feet and built of native stone. On these grounds, are to be seen the old town whipping post and pillory, the site of the first log cabin of the first settler, and that of the house of Colonel Ethan Allen, besides some rare specimens of captured Revolutionary war-ordnance.

Five miles to the west of Battle Monument, on a slight knoll in "Battle Park", stands a boulder bearing a bronze tablet with the legend: "General John Stark's Camping Ground, August 14, 15, 16, 1777. 'There are the Redcoats, and they are ours, or, this night, Molly Stark sleeps a widow'."

It was well worth my while to make this short run of five miles out of our course to stand on this ground; but, oh, how many gay parties did I see speeding past such historic spots, all apparently indifferent to their surroundings!

From Bennington, which we left with reluctance, we headed for Lake Sunapee,

New Hampshire, passing through Manchester nestling at the foot of Equinox Mountain, from which may be seen the Catskills, the Berkshires, Lake George, and, far to the north, Lake Champlain. The road from Manchester passes through the Green Mountain Range, over Peru Mountain Pass, among the tree clad hills, where are caught glimpses of old-fashioned farmsteads, thence through typical Ver-



Fig. 6. In Au Sable Chs.

mont villages—a most delightful drive. One of the most charming hotels, visited by us, is the Granliden Hotel situated on the west shore of beautiful Lake Sunapee. Here is a place where one can rest and enjoy life for a few days. There are boating, tennis, golf, and picturesque drives, wood-paths and trails amid forests of pines, spruces, and balsams. Magnificent views are here afforded from many points.

After leaving Sunapee, the route led through the valley of the Pemigewasset into the heart of the White Mountains,

the scenery becoming more and more impressive as we proceeded.

Franconia Notch is entered at North Woodstock. As the Notch is ascended, the rocky profile of "The Old Man of the Mountain" comes into view. This cardinal wonder of the New Hampshire highlands is, undoubtedly, the most remarkable freak of nature of its kind in the world. The "Profile" is so marvelously true to life, yet, so gigantic, that it seems as if it had been carved by some divine genius. Still, the Profile is, in a sense, an illusion; for, if viewed only a short distance from the correct angle, the appearance vanishes and one sees only a jagged cliff.

To stand where I did and watch the mist slowly rise from the "Old Man", as if the sculpture were being unveiled by some unseen hand and have it stand forth sharply outlined in the sunlight, is a picture never to be forgotten. One can but gaze with admiration and awe upon that stern and melancholy visage looking imperturbably down the strikingly beautiful valley. Twelve hundred feet below, lies Profile Lake, "than which", to quote Doctor

Prime, "there is nowhere on earth one more beautiful." Hawthorne bestowed upon the Profile rock literary immortality in his beautiful allegorical tale, "The Great Stone Face", and, later, Edward Roth, in his legendary tale of "Christus Jude", has an Italian painter find in the Profile the fulfilment of his conception for the face of a figure of the Christ sitting in judgment.

From the beautiful Franconia region, we proceed into the rugged and impressive region of the Presidential Range and Crawford Notch, passing Echo Lake as it glitters like a crystal mirror in a frame of velvet green. While this region is not of historic interest, as is the region of Lake George and Lake Champlain, it, nevertheless, is of interesting geological expression and a region of rare and inspirational beauty. Geologically, these mountains belong to the older, or crystalline, belt of the Appalachian system and are made up of ancient metamorphic rocks, chiefly gneisses, with a core of granite forming the highest portion.

[*To be continued*]

After Thirty Years—XIV.

Notes and Reflections on Life and Work

By WILLIAM RITTENHOUSE, M. D., Chicago, Illinois

[Continued from May issue, page 348.]

He Opened His Mouth and Put His Foot in It

THE startling feat of one "opening his mouth and putting his foot in it" has probably, been performed by most of us, literally and actually, at a time when our spines were more flexible than they are now, at that period of our lives referred to by the schoolboy who defined a reptile as "an animal that creeps", and named as an example "a baby". But, this same feat is often performed metaphorically by people of mature years, the first metaphor referring to an eruption of hot air, and the second containing a dark reference to a trap. It was in the metaphoric sense that a certain Dr. D. F. Bonehead accomplished the feat specified in the subhead above. Readers who are prudish or puritanically

conscientious had better skip the remainder of this.—They'll all read it now.

The doctor of the ivory dome did it, partly because he is a bonehead, partly because he did not stop to think, and, partly, also, because nobody had warned him. Our Doctor Bonehead, one day, or night, was acting as director of ceremonies for the stork in a new family—new in the sense that this was their first offense, and new, also, in the sense that this was his first professional appearance in that evolving family. So, of course, he could not be expected to know their family-history. Now, could he? A mother-in-law was hovering on the horizon, one of the kind that is chronically jealous of her daughter-in-law and who would rather catch said daughter-in-law in a trap than eat the finest dinner ever cooked. Now, it so happened that the time that had elapsed since

the nuptial ceremonies had been performed was exactly eight months; which fact, was unknown to the doctor; for, as I said above, nobody had warned him.

When the little stranger was being washed and dressed, a ceremony performed by the mother-in-law, that amiable and angelic individual looked up at the doctor with the sweetest of smiles and gushed: "Isn't he just perfect? Nothing premature about him!" and the innocent doctor, true to his name and initials, gushed back: "O, no, nothing premature. He's perfect." Now, about the only thing that can be said in palliation of the doctor's thoughtlessness is, that the psychological atmosphere of the lying-in room just after the great event is peculiar—it is, in fact, gushy, if I may coin the word. Everyone there has been under an intense strain of mental anxiety for hours. When, suddenly, everything is happily and safely terminated, the pendulum swings to the other side, and even the most stolid can not entirely escape the contagion of joyful enthusiasm. Every obstetrician will understand what I mean. Nevertheless, even this fact does not excuse the doctor's *faux pas*. Yet, he was not such a bonehead that he failed to notice the look of triumph on mother's face, of consternation and indignation on the husband's face and of anguish and approaching tears on that of the wife. And, when mother was out of the room getting breakfast, he had a bad quarter of an hour smoothing things over.

Said the wife: "Now, she'll spread it all over the neighborhod that it's not a premature birth, and she'll quote you as authority". Added the husband: "Yes, and she said this morning that eight-months' babies never live; so, she'll quote that old superstition to prove that this one is not an eight-months' baby". The doctor objected: "Then, why didn't you warn me?" And so the foundations were laid for a crop of tears and heartburnings, and, above all, for a fine, juicy morsel of scandal for all the gossips in the community. (That's a mixed metaphor; but, let it ride; a crop needs a foundation, and so does a morsel.)

If the doctor, before answering mother's question, had said: "Let me look at him again", and had then carefully examined the nails, and felt of the fontanelles, and looked the skin over for lanugo, he would have had time to reflect and prepare an

answer that would have squelched gossip at the outset. What he found would not have mattered as much as the decisiveness of his answer. A doctor that can not lie like a gentleman when a woman's good name is in question had better wrap his conscience in absorbent cotton and pack it away in the safe: It is too frail and tender for this rough world. Now, Mr. Puritan, I have said it. Do your worst.

Doctor Bonehead thought that he would never make another break. But, alas! for good resolutions! One day, he was attending a supposed primipara and, during the course of events, he detected evidences of a lacerated perineum. The family were strangers to him; he thought he remembered that they had said that this was their first child. However, discovering the scar of a laceration, he concluded that he had not heard or did not remember correctly, and therupon blunderingly remarked to the patient: "Did you have a hard time with your first baby?" Indignantly she replied: "This is my first one. What are you talking about?" "Why, er—er—" stammered the doctor overwhelmed with mortification when he saw what he had done, "Why, I got you mixed up with another patient".

But the mischief was not so easily undone. Friend husband had heard and suspicions sprung up in his mind that were never entirely allayed. A cloud had been raised, the shadow of which was destined to darken the sunshine in what might have been a happy home. When the husband privately questioned the doctor, the latter, be it said, valiantly insisted that there was absolutely no ground for suspicion, and that he really had got the case confused with another.

If these two sketches carry a moral, I should say that it is this. Doctors should not talk too much or, at least, they should learn to be noncommittal when they do talk. Virtually every doctor that enjoys a large obstetric practice has encountered circumstances such as the two here related. If only he will realize what untold unhappiness a thoughtless remark on his part may cause, he assuredly will most carefully guard his words.

I have had many a new patient (and it might surprise my readers if I told them how many) say to me privately: "I presume that you will discover that I have had a child. Still, nobody here knows about it, so, do not give any sign that you know

this. I made one false step; but, I paid the penalty and have been straight ever since." It seems to me that the doctor who would betray such a confidence would not be worthy of associating with decent people. Still, someone with a super-sensitive conscience may feel impelled to ask: "What about the husband that was deceived, believing that he was marrying a bride without a blemish on her history?" The answer is, that the doctor is not commissioned to right all the wrongs that he meets. Besides, would it be righting the wrong if he betrayed such confidence? Far from it. Matters would not be bettered in a single respect; indeed, they would be made vastly worse in every way. In every single one of these cases that came under my knowledge, the woman made a blameless wife and mother.

Measles and Pneumonia

We have heard a great deal, during the past decade, about measles being a very dangerous disease, and we must all admit that, under certain conditions, pneumonia is liable to become a serious complication. However, fifty years of observation of the way in which the laity used to deal with measles—and in which many of them still deal with it—the experience of many of my confrères, as also my own experience, all combine to lead me to the conclusion that measles is a pretty safe disease, if properly managed. I am not ashamed to say that we can often learn valuable lessons from the laity, provided that we carefully observe facts rather than accept theories. The people are often right in their facts, although wrong in their explanation of those facts; still, even we medical men must sometimes plead guilty to the latter charge.

In my boyhood and long after, the doctor was seldom called to a case of measles. The patient was kept in a warm room (sometimes all too warm), and, when the eruption was due to appear, hot drinks were freely given to bring it out; and this, as a rule, was the satisfactory outcome. Then, after the eruption was well developed, convalescence took place rapidly.

Now, in the main, this treatment rests on a sound basis. We all know that warmth, internal and external, promotes the eruption, while a plentiful eruption usually is followed by rapid improvement. Of course, superstition was often mixed in

with proper treatment; the room was kept too warm, ventilation was neglected or, even, carefully excluded; and mother often "slipped one over" on the children, because she had a profound faith that "nannyberry tea" was as good for measles as modern gardeners have found it to be for producing flowers.

It was long ago observed that chilling the body when the eruption was out had a tendency to drive it back, and that this was likely to be followed by pneumonia or some other complication. It was also observed that, as a rule, adults had the disease more severely than did the children, and that those that escaped the disease in childhood were pretty sure to have it some time in adult life, because no one can expect to go all through life without sometime or other being exposed to measles. Furthermore, it was observed that, in the army, in the navy, in concentration-camps, among savage races, in fact, wherever large numbers of people are gathered together, an outbreak of measles was sure to be attended with complications, especially pneumonia, and a high death rate. This fact I believe to be mainly owing to the impossibility of maintaining a comfortable, even temperature and at the same time providing good ventilation, without hurtful draughts under such circumstances.

The Management of Measles

In the whole of my professional life, I have tried to base my treatment of measles upon the aforesaid observed facts, and the results have justified my measures. I have treated as many cases as has the average family-physician during a third of a century. I can not say just how many, but, it is many hundreds, and these patients have been among every class of people, rich and poor, native and foreign. In all that time, I had but two cases in which pneumonia occurred as a complication: in one before I was called, and in one that disobeyed orders by sitting near an open window on a raw day—the child's mother being a fresh-air faddist.

When I take charge of a case of measles, my first step is, to impress those that are to attend the patient with the idea that measles is not a dangerous disease if the patient be kept in a comfortable summer temperature, even and free from draughts. The room must be warm enough to prevent the patient getting chilled, and, yet,

not too warm. Ventilation is desirable, but, it must not be allowed to interfere with the even warmth of about 72 or 75 degrees, especially when the rash is due and for three days after its appearance.

Just before the eruption appears, a high fever often makes the patient very uncomfortable, and then a few small doses of acetanilid not only will give relief, but, will promote the eruption better than will hot drinks. If the latter are given at all, they should not contain alcoholics. For, a child of five years, $\frac{1}{2}$ grain of acetanilid may be repeated every two hours until relief is obtained.

Because children have the disease lighter than adults, and, because the chances are slight that a given individual can go through life without being exposed to the contagion of measles, the laity formerly made little attempt at quarantine, on the ground that, since a child is pretty sure to have the disease sometime in life, it was better to have it in childhood under favorable circumstances than to risk having it later under possibly unfavorable conditions. In view of the fact that we have no prophylactic measures for measles, I am inclined to think that the laity were right; and, if I had ever so many children, I should make no particular effort to prevent them from having the disease when the conditions were controllable.

The situation is somewhat similar to

that regarding smallpox before the discovery of vaccination. In my boyhood, there were living many people who could remember those days, and I have often heard them tell how it was the custom to encourage voluntary exposure to the disease either by inoculation or by contact. The result was, that most people contracted the disease in early life under conditions as favorable and controllable as possible, and most of them had it in a mild form. The testimony apparently was a justification of the plan. It was rare to meet a person that was strongly pockmarked. My father was sent, at the age of twelve years, by his parents to visit a smallpox patient, for the purpose of contracting the disease. He had it so mildly that only half a dozen pustules developed.

So far as the danger in measles is concerned, I am convinced that many cases are aggravated and complications caused by unintelligent attempts at ventilation. Fresh air is an excellent thing, so excellent that it is a pity to have its benefits marred by the intemperate assertions of some of its overenthusiastic apostles, and their failure to recognize the fact that there are dangers to be guarded against, as well as benefits to be derived, in carrying out the details of ventilation, especially in dealing with a case of measles.

2920 Warren Ave.

[*To be continued.*]

Therapeutic Nihilism—Also Special Uses of Gelseminine

By R. J. SMITH, M. D., Pocatello, Idaho

THERE is no doubt in my mind, and there can be no doubt in the mind of any acute observer, that drugs again are coming into their own, that they are being employed more scientifically, with less of the haphazard prescribing of past days and with a better appreciation of their field of action. The drugs now are supported and supplemented in their action by other remedies and agencies, including hydrotherapy, psychotherapy, spondylotherapy, measures and procedures that were thrust upon our attention by the success obtained with them in the hands of irregulars, the result being to the advan-

tage of the patients as well as adding to the success of the physicians.

We are getting away from thinking mainly of the disease, as such, acknowledging the existence of the disease-process, but, combatting the symptoms of that disease as expressed in the patient. The patient is also of greater importance, now that we realize the importance of the influence of the mind upon body; as, for example: A physician in general practice in a small town and a large contiguous country district endured with ease the hard work and arduous duties of a country practitioner entailed by a prolonged epi-

demic of influenza, and did not contract the disease. However, after the epidemic had waned, fatigue gripped this physician, and the fatigue-poisons began to make his existence almost unbearable. Exposure to inclement weather induced an attack of what his one-idea mind told him was influenza. High temperature, intense backache and headache, malaise—surely, it must be the “flu”. So, having plenty of acetanilid and nothing else at hand, he proceeded to quiet that pain with heroic doses of that drug. Then, by some ironic chance, seeing himself the next morning in a mirror and noticing his finger-tips, he *knew* that influenza-pneumonia had him in its dire grasp; and, that so often was fatal! Blue funk! But, then, he was worn out, tired, and not to blame. And, then, a doctor has a fool for a patient when he tries to doctor himself—all too often. A good cleanout, a little stimulation, some sympathetic nursing, and, in a few hours, he was himself again.

Despite the mental slump that the medical profession took when we were deluged by the epidemic of influenza, with overdrugging and fearsome prescribing, despite the growth in popularity of the drugless cults, there is noticeable an increasing faith in drugs and a growing interest in the subject. The public demands relief from unnecessary suffering. The physician is rated high or low in proportion as he relieves or cures his patients or fails to do so. Our success is measured by our ability to prevent and cure disease. Beside those measures that act in a purely physical way or affect the chemistry of the organism, an equal place must be given to active medicaments.

The increasing interest in drugs is along the line of the active principles and away from the oldtime galenicals with their unreliable varying activities. The active principles are of definite composition and action and do not lose virtue, year by year, by from twenty to forty percent as do many of the galenicals. I make an exception in the case of the socalled “specific medicines” of the eclectics, which I have been employing for many years with pleasure and advantage. The old fashioned galenicals have made pessimists of the medical profession, to our great loss. Now let the active principles make optimists of us.

There is one remedy that stands the test of time, one that is so definite and certain

in its action, so reliable, so indispensable in its field of action, and so specific in its effects, that it has been called the “sheet-anchor” in all hyperemic conditions. This super remedy is gelseminine hydrobromide. It is called the children’s remedy, and it is in almost daily use in the practice of those that know its many virtues. The “specific medicine” gelsemium is very reliable, also.

Gelseminine hydrobromide acts upon the central nervous system, lessening nerve-activity and diminishing the blood supply. It is a remedy for sthenic conditions. It has no place in asthenia or in dulness of congestion of passive nature. If the physiological action is manifested in the course of treatment or if the symptoms are ameliorated, its administration should be temporarily suspended.

There is no intention to dwell at length upon the action of this remedy, as that has been very thoroughly recorded by Professor Finley Ellingwood, of Chicago, and by many others, who have described the specific symptoms that govern its administration. However, there are certain important effects of this drug that deserve special emphasis.

Some Special Properties of Gelseminine

Clinically, gelseminine is a most dependable drug and may be given freely up to the point of its physiological effect. The latter, briefly, consists in the loss of muscular power, depression, drooping eyelids, and heavy sensation in the legs.

It is prescribed when the following specific symptoms are present: Bright eyes, contracted pupils, flushed face, elevated temperature, and fast, full pulse. Thus, it is indicated in acute inflammatory affections, in spasmodic conditions, in reflex spasms of children, in dentition, in spinal irritation, muscular twitchings, chorea, and in all conditions with the foregoing indications, although it may be given also when there is pallor, together with throbbing arteries, providing there are no indications of asthenia present.

There is no one remedy with so great a field of action as gelseminine. It runs the gamut from infancy to old age, from abortion to zoster, and, geographically, from east to west, from north to south, although it may act more definitely in the South, where it is native.

Gelseminine has an important field of action in the treatment of drug-habitués

If given to an addict when he is suffering from cramps, nervousness, irritability, in conjunction with strychnine, there is an immediate cessation of all these symptoms, the euphoria following being similar to the "kick" vouchsafed by a regular dose of morphine. I have tried this so often in all classes of cases in men and women addicts, and with invariably good results, that I prescribe the combination quite often. The dose depends on the accustomed amount of the narcotic. Usually gelseminine hydrobromide gr. 1/25, with strychnine nitrate, gr. 1/20, is sufficient. Morphine-addicts stand large doses of strychnine. I have given 1/2 grain within eight hours when desirous of cutting short the final symptoms of the reduction-cure.

Gelseminine is used, further, in all cases of determination of blood to the brain. It

lessens the supply of blood to the cerebro-spinal centers. It is of value in alcoholism. Strychnine acts more especially upon the cord, increasing muscular activity. It is also one of the best remedies for alcoholics, if prescribed fearlessly. The dose is 1/12 grain, repeated to effect.

These two remedies are antagonistic to each other in cases of poisoning by either one; but, in the autotoxemia of drug-addiction, they seem to act well together. There is no condition that calls so loudly for elimination as does that of the addict. And here the blue pill and the compound cathartic pill act well in large doses.

I do not mean to assume that these two drugs may be used exclusively in the treatment of drug-addicts; still, an occasional dose will replace morphine and assist in the reduction-treatment.

Clinical Studies in Mental Diseases

A Case for Diagnosis

By LEON E. DUVAL, M. D., Washington, D. C.

Assistant Physician, St. Elizabeth's Hospital, Washington, D. C.

THE case quoted in my first article did not offer any great difficulty as to diagnosis. The case now to be reported is one that offered more or less difficulty at first, through the similarity of its symptomatology to that of the depressed phase of a manic-depressive psychosis. The difference in prognosis between this psychosis and dementia praecox (which was the final diagnosis in the present case) makes the question of diagnosis an important one. There are many border-line cases, that present symptoms of both diseases, in which accurate differentiation is not possible, and in which we must let the prognosis be determined by the ultimate progress of the condition, since we are not able to foretell how the situation will develop. Indeed, I am almost inclined to class the present case in this group, despite the fact that the patient shows no tendency toward improvement after fifteen months of treatment. However, before I comment further upon this case, let us study its history and symptomatology.

Case-History of the Patient

I. R., a stenographer and clerical worker, was 34 years old when admitted in Oc-

tober, 1917. He was born in the District of Columbia. That there was a defective heredity, is indicated by the fact that the father died of "paralysis" and the mother now suffers from apoplexy. A brother was an alcoholic for years. The patient received a high-school education and has always been a clerical worker. He was married at the age of 21, and has one child, a girl of 12 years. He has never had any serious physical illness. As to habits, he was a model husband and father, with one exception, to be noted later. He was sober, reliable, industrious, highly esteemed by all who knew him.

Three years before admission, he had a brief "nervous breakdown" and another one and one-half years later. In both of these, he was depressed, but, made a good recovery in a few weeks. It is to be observed here that, whenever one obtains a history of one or more "nervous breakdowns," one suspects that they really were mental upsets of some sort. If these occur with more or less frequency, one thinks of manic-depressive psychosis or incipient dementia praecox. Not infrequently, a "nervous breakdown" is the precursor of

organic brain disease, and, if we overlook this fact, serious diagnostic mistakes may be made, with resulting lack of conception of the gravity of the situation.

The present illness began in July, 1917. The patient became sleepless, worried, agitated, afraid that he could not work and care for his family, and was quite depressed. Later, he expressed the idea that his soul was lost and that his wife and child were in heaven. He said he wanted to go to them. He had ideas of unworthiness and believed that he had committed the unpardonable sin. This picture is quite typical of the depressed phase of a manic-depressive psychosis. However, we never must make snap diagnoses in mental cases, no matter how typical the symptom-syndrome may seem to be. Only after careful observation and careful consideration of every factor in a case are we justified in attempting a definite diagnosis. For example, it is possible for paresis to be ushered in by a typical manic attack or with the mental picture of dementia praecox. I have seen a paretic presenting the typical picture of catatonia.

The patient was neat, walked with a careless slouching gait, and his facial expression was one of absolute despair. He answered questions slowly but relevantly, in a monotonous voice. The monotonous, expressionless voice makes one think of dementia praecox, epilepsy or mental defectiveness, being especially characteristic of the last two.

Auditory hallucinations were present. The voices helped him to decide his problems. It must be remembered that a hallucination represents one side of the patient's personality. When a man hears a voice accusing him of being a thief, it means that he either has been a thief or has, at some time, wished to steal. Auditory hallucinations represent one part of the patient's mind, while the other side is represented by the emotional state produced by the result of the hallucinated ideas. It is not uncommon in dementia praecox for the patient to hear good voices in one ear and bad voices in the other. The bad voices are likely to represent repressed wishes, while the good ones symbolize the conscience and the moral training of the patient.

The patient declared that his admission to the hospital made the world come to an

end. He was afraid that his actions would ruin his friends' prospects for the hereafter. He was afraid to smoke, believing it a sin. The voices told him to kill himself, and he tried to obey them by butting his head against the wall. He had virtually no insight into his condition. He was perfectly oriented, memory was excellent, and he performed the routine intelligence-tests well. Physical examination and laboratory findings were negative.

Given the foregoing picture, the diagnosis of a depressed phase of manic-depressive psychosis is the most natural one to make. For, we have here the usual ideas of unworthiness, the morbid fears, the retardation and the other features of the syndrome. Even the auditory hallucinations are not atypical, for, they are frequently seen in this psychosis. However, they are likely to be brief in duration and changeable in character. Still, as I already have said, we must not formulate a diagnosis without having considered every side of the condition and having watched its course.

The Sexual Life a Clue to Diagnosis

It may be observed that nothing has been said concerning the patient's sexual life. This aspect of the individual is much too liable to receive but little attention in case-studies. If carefully and understandingly investigated the sexual life will furnish the clue to many an otherwise difficult diagnosis, not alone in mental disorders, but, in nearly every other branch of medicine. Thus, we all know how a dyspareunia that will yield to no local or internal medication can be overcome if the woman finds a compatible lover. That is to say, the dyspareunia provides a means of avoiding the embraces of an unloved husband, although it by no means is simulated or wilful. This is a simple example of the aid that the study of the patient's sexual life can furnish.

Of this patient's earlier sexual life, we know but little. He had, on a few occasions practiced pederasty. Four or five months before his illness began, he had forced his wife to permit fellatio. The wife was naturally sexually frigid, but, did not object to allowing normal coitus. However she strenuously resisted the patient's perverted tendencies, and many quarrels resulted. The patient began to worry about his abnormal desires, and the present ill-

ness soon followed. He felt an impulse to injure his wife, but, did not do so.

During his residence in the hospital, his mental state has been somewhat variable. He has always been inactive, sitting idly about, lacking interest in his surroundings, although fully aware of what occurred about him. He began to feel that he was Christ and that his physician was God. At times, he entertains ideas of suicide, and, on one occasion while visiting his brother, actually attempted to secure poison. At one time, there was an entire relaxation of the moral censorship. His language, previously clean, became extremely obscene. He freely expressed the desire for fellatio, and, for the time, was not depressed. The auditory hallucinations have persisted. At times, he is accessible, at others, reticent and withdrawn from reality. For a time, he attempted to find comfort in religion, but, gave this up, because his pastor did not call to see him. Typical of the mental state of the precox were some of his letters to his pastor at this period. After discussing his need of religious consolation, he would end his letters thus: "I would like to have you come to see me, but, if you don't want to, you can go to hell." He was induced to try some light clerical work, but, found himself unable to apply himself for more than a few minutes at a time. On the whole, there has been neither improvement nor regression in his condition.

Several features of the case led the hospital-staff to diagnose the case as dementia praecox, probably of hebephrenic type. Auditory hallucinations, while compatible with a manic-depressive psychosis, are likely to be transitory in that condition. The idea of being God or Jesus Christ is likely to indicate a serious splitting of the personality, the socalled Schizophrenic reaction. From a diagnostic standpoint, this indicates a dementia-præcox type of psychosis. Relaxation of moral censorship, permitting free expression of one's desires, is seen both in dementia præcox and in the manic-depressive psychosis, but, is much more typical of the former. This relaxation never is so complete in the manic-depressive psychosis as in dementia præcox. Ideas of suicide may be present in both psychoses. Active suicidal attempts are seen in both: superficial attempts, and cases in which the idea is expressed, but,

no actual attempts made are more characteristic of dementia præcox.

The symptom, in the case under consideration, that is indicative of a serious mental difficulty is, the withdrawal from reality, which is most typically seen in dementia præcox and is known as the "intraversion mechanism." By this term, we mean the concentration of the individual's psychic energies upon himself, a withdrawal of his interests from his environment, with a tendency to shut out, in greater or less degree, the external stimuli and paying attention only to internal stimuli.

Such a mechanism indicates serious psychic defects; that is, it means that the individual is lacking in ability to adapt himself to the demands of reality, more especially to such demands as conflict with his mental comfort and personal inclinations. The delusions described in this case also are indicative of the same type of mechanism. The idea that one is the Son of God indicates certain biological deficiencies, which need not here be described. As a compensatory measure for the conscious or unconscious feeling of (biological and social) inferiority which the individual possesses, he evolves an idea that is just the opposite of this feeling—that is, there is developed a sense of great power and potency.

The Prognosis

In the presence of such a mechanism, the outlook is more or less serious. The patient may recover from the present episode, but, there will remain a marked tendency toward a recurrence later, as this individual meets unpleasant stresses in his contact with the world. It is impossible to avoid such contacts at times, and it depends upon the individual's powers of adaptability whether he again breaks down or manages to combat successfully the situation. In every such case, there is considerable tendency to chronicity, and, while the individual may improve, he may never recover sufficiently to enable him to return to the world and become an efficient social unit.

In such a case as the one in question, therapeutic measures must be employed with great circumspection. Such a patient always is a potential suicide, and the suicidal tendency may manifest itself suddenly and, often, at a time when the patient seems to be improving. I have had this brought for-

cibly to mind recently by a nearly successful suicidal attempt by a patient who for several weeks had been doing light clerical work for another member of the staff and apparently had made marked progress. Therefore, we must be sure that these patients are given no possible opportunity for harming themselves. What this means can be understood only by those who have tried to thwart the suicidal attempts of a determined patient, for, they will resort to any possible means of attaining their end. I know of a recent case in which a man tore out considerable tissue from the pharyngeal vault in such an attempt. I may state that later he did succeed in ending his life.

As to the Management

It is exceedingly unwise for an untrained physician to attempt to treat these patients. No two of them call for the same kind of treatment. As I have previously said, each case is a law unto itself, because no two minds are made up of the same sort of material. The psyche is made up of the combined experiences, impressions, and environmental influences of the individual's entire life. And no two individuals have had the same combination of experiences, impressions or environments. While there may be some similarity in the psychoses of two given individuals and in the problems involved, there always will remain vast individual differences and idiosyncrasies that must be given consideration.

Psychotherapy is, of course, the most important factor in the treatment of these patients. Rightly used, it assists the patient to regain his hold upon his situation, and to re-enter the world of reality. This is the real object in the treatment of all mental cases. Wrongly employed, psychotherapy is capable of doing untold harm. Tactless questioning, wrongly used suggestions, wild attempts at psychoanalysis by half-trained psychiatrists—these things set back the patient in his struggle for the light, even to the extent, at times, of permanently destroying his chances for recovery.

This may sound rather exaggerated; but, it nevertheless is true and should dampen the ardor of the well-meaning but untrained physician who would treat such cases. I do not wish the reader to get the impression that I am trying to scare away

the general practitioner from all mental cases. A general practitioner *can* treat certain mental cases, provided he will properly prepare himself to understand them, and to give them the square deal, but, which he can not give if he goes blindly at the treatment.

It is of prime importance to recognize that each mentally ill person has been overwhelmed by some personal difficulty and that the psychosis is a protection from reality, with the pain which reality produces when allowed access to the patient's consciousness.

It is the physician's problem to assist the patient in solving his problems, in finding the way to return to the world of men and things, and to resume his normal place in society. And, this is not an easy task. The personal problems of the individual are, as a rule, unrecognized by himself, being a part of the unconscious mind, so that the individual is able to call them to consciousness only through the aid of the trained psychiatrist.

Although psychoanalysis has many opponents, it, nevertheless, is founded upon a sound basis, and in such cases as above cited no other method is capable of reaching the root of the difficulty in the manner in which psychoanalysis is able to do. All other methods of approach to the mental problems of these victims leave the unbiased investigator with a feeling of having but imperfectly sounded the depths of the situation. And, halfway methods have no place in psychiatry. I do not mean to give the impression that every case of this type can be cured by psychoanalysis or that a complete psychoanalysis should be tried in every instance. There are many cases entirely unsuitable for treatment by this procedure. What I wish to convey is, that the study of these cases in the light of psychoanalytic knowledge will assist in giving an understanding of the individual's problems, will reveal the motives for many otherwise unaccountable thought-processes and acts, and, in a limited number of cases, will be able to effect radical improvements or even a cure.

I am not a crank about psychoanalysis, although coming in daily contact with some of the foremost psychoanalysts of the country. But, my personal observation of a respectable number of dementia-præcox victims convinces me that the psychosexual

life and its problems lie at the basis of virtually every case of dementia praecox, not to mention the other functional psychoses. One does not have to analyze all his cases to come to such a conclusion. Every little while, such a patient will state his problems with startling clearness. And those that do not consciously realize the nature of their difficulties are likely to express them symbolically in one or another form.

I recently saw a series of exquisitely done drawings, in which a woman patient drew sexual scenes of every description. The sum total of the drawings could be interpreted in terms of her own mental conflict. However, the interpretation of these symbolisms belongs to more technical papers, while I am attempting to present only more practical points.

The general practitioner has little time to interpret symbolisms, or patients' dreams; yet, a knowledge of these things will assist him in his daily practice. Especially should he be able to interpret the complaints of neurotic patients in terms of the patients' mental difficulties rather than to attempt to cure them with bread pills, trips to Hot Springs, and like makeshifts.

At the risk of being misunderstood by some of my readers, I will say that, in every neurotic or hysterical individual, the fundamental etiologic factor is some disturbance of the sexual life. Perhaps the term "psychosexual" would be better in this connection. And, by this term, is not, necessarily, meant impotency, active sexual perversion or other gross manifestation. A really good understanding of what the psychoanalyst means by "the sexual life" can best be understood by reading some of Freud's works. Several months ago, there appeared in this magazine, a short article, consisting of a letter from a physician's life, quoting several cases of sexual dissatisfaction among traveling men and their wives. An example was given, where one man's wife always was in the menstrual period when he came home or she always had some illness that prevented the fulfilment of her marital function. This is a plain example. The husband was not loved and intercourse was repugnant.

If my reader will task his memory a little, he can recall many similar instances. Among the rich, if a woman feels disinclined to play her part as a wife, it is easy to find a physician that will prescribe a

trip to Europe or other means of leaving friend husband to himself. In the less favored classes, pruritus vaginæ, false pregnancies, and a host of other maladies serve the same purpose.

And, not to confine my observations to one sex alone, impotence in the male can produce an equal variety of symptoms. The hysterical male is as common as is the hysterical female, although not recognized as such in many instances.

I have wandered rather far from the original purpose of this discourse. But, I have tried to emphasize the importance of getting at the individual problem in all mental cases. I have tried to show that the treatment of such patients consists in assisting the individual to solve this problem and to enable him to take up again his place in the world.

Occupation-Therapy

Before closing, I must mention occupation-therapy in mental disease. This occupies a very important place, especially in cases in which there is but little hope of employing psychoanalysis. It should also be tried in conjunction with every form of psychotherapy. It must be prescribed to fit the individual case. Sometimes it is well to prescribe work the opposite sort of that to which the patient is accustomed. For example: a physician recovering from a mental upset derived great pleasure and much actual benefit from hard labor on the hospital-farm. Often, however, those from the higher walks of life have an aversion to manual labor, so that, in all cases, we try to find work that is agreeable to the patient. Work of a constructive nature yields the best results, as a rule.

Many times, it is exceedingly difficult to get a patient to do anything at all. Such cases call for much patience and persistence on the part of the attendants. I recently saw a number of praecox-sufferers who had not done a bit of work for years, get interested in the digging of a cellar-hole, and several of them requested to be allowed to help.

We also must allow a certain amount of recreation, in each instance suited to the individual case. Perhaps the reader believes that I lay much stress upon the individualization of therapeutic measures; but, this is made necessary because of the wide differences in the personalities and personal problems of these patients.

Laminectomy Under Local and Regional Procaine-Anesthesia

By F. H. McMECHAN, A. M., M. D., Avon Lake, Ohio

Editor of "The Quarterly Supplement," and of "American Year Book of Anesthesia and Analgesia."

A. C. STRACHAUER (*Journal-Lancet*, Feb. 15, 1916) and C. H. Frazier (*Trans. American Surg. Ass'n*, 1917) have drawn attention to the necessity of using local and regional anesthesia for laminectomy in patients showing evidence of cardiac decompensation, depressed renal function, neurologic pathology, and wasting or exhausting conditions. Krause, Horsley, Cushing, Elsberg, and other neurologic surgeons all comment upon the profuseness of hemorrhage in laminectomies, which frequently is so great as to necessitate the abandonment of the operation or else its performance in two stages. Shock and hemorrhage are the causes of death in laminectomy. But, both factors can be reduced to a negligible minimum under appropriate local and regional anesthesia.

The Neuro-Anatomy Involved

The anterior and posterior roots of the spinal nerves join within the intervertebral foramina. Shortly after the so formed spinal nerves emerge from the foramina, they send off communicating branches to the sympathetic and then divide into anterior and posterior primary branches. The anterior branches form the intercostal and abdominal nerves; the posterior branches supply the longitudinal muscles and fascia of the back and the periosteum of the vertebrae and innervate the skin to the right and left of the median line. Down to and including the 6th thoracic nerve, the internal branches are mainly cutaneous and the external ones mainly muscular. From the 7th thoracic nerve down, the reverse condition obtains (Piersol). It is the posterior branch that is blocked for the purpose of obtaining anesthesia for laminectomy. Frazier has observed that division of the posterior spinal roots obtunds an area similar in extent to that obtunded by paravertebral injections of procaine. Frazier prefers to

inject the parent trunk, the intercostal nerve on the basis of anatomical studies made, at his suggestion, by W. A. Sawyer in investigating alcohol-injections for the relief of intercostal neuralgia.

In order to orientate the intervertebral foramen, the midpoint between the transverse processes serves as the guide. This interval has been estimated as 2.9cm. to the right or left of the median line. The location of the intertransverse spaces in the thoracic region must be determined by means of palpation, although, in the lumbar region the tip of the spinous process is a little above the lower border of the transverse process of the corresponding vertebra. But, in the thoracic region, having determined the location of one intertransverse process, the location of those above and below is not difficult, since the distance between them is represented as 2.5cm. and is fairly uniform. The intervertebral foramina in the thoracic region should be reached at a depth of 3cm., and at a depth of 4cm. in the lower thoracic and lumbar regions. A matter of real import, Frazier warns, is the angle at which the needle is inserted. An angle of 45 degrees to the vertical midline or of 35 degrees to the cutaneous surface (Sawyer) is the safe and proper inclination and will prevent the needle from passing into the intervertebral foramen and on into the cord-substance. To determine these angles, measurements may be made with the aid of a protractor. Strachauer and Frazier employ narcotesthesia preliminary to operating.

Method of Making the Injection

Strachauer outlines an ample field of operation by the formation of endermic wheals at convenient points, as, ABCXYZ, forming a hexagon. The endermic wheal is formed by the injection of a 0.5-percent procaine-solution made through a very fine needle directly into the skin, which latter immediately is rendered anesthetic, thus making subsequent manipulations and injections through the skin painless. A long-

*This is another of a series of papers on the scope and utility of procaine-anesthesia, collated, from the current literature of the subject, for the benefit of readers of THE AMERICAN JOURNAL OF CLINICAL MEDICINE.

er needle then is introduced through these wheals and then points *ABCXYZ* are connected by means of the subcutaneous injection of a 0.5-percent procaine solution, thus completely encircling the operative field with an obtunded area.

For the blocking, Frazier draws a vertical line corresponding with the spinous

At these topographical landmarks, the needle is inserted, at an angle of 35 degrees to the skin-surface, to a depth of from 3 to 4 cm., into the thoracic and lumbar regions, respectively. When the needle comes in contact with the nerve, the patient experiences a sharp pain, which he refers to the terminal distribution of the nerve, but, which is soon allayed by the injection of a few drops of the solution. From 5 to 10 mils (Cc.) of a 0.5- or 1-percent procaine-adrenalin solution is injected at each point, according to whether the in-

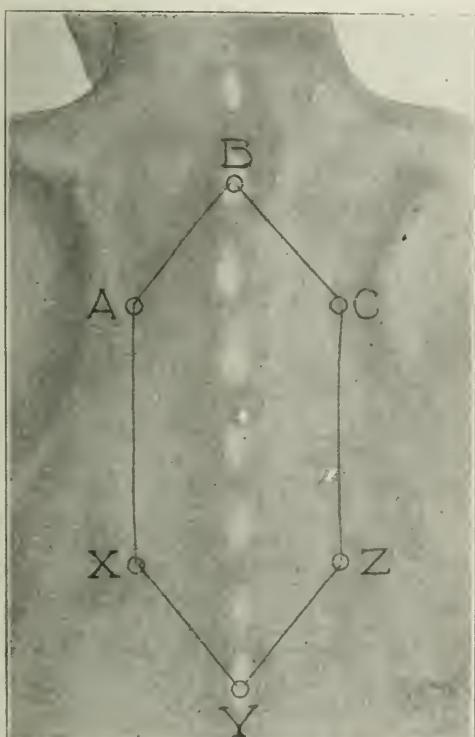


Fig. 1. Field of operation for laminectomy. The hexagon ABCXYZ delimits the area of local anesthesia, produced by infiltration. The posterior primary branches of the several spinal nerves involved are blocked by deep injections as described in the text. (Courtesy of Dr. A. C. Strachauer of Minneapolis, Minn., and *The Journal-Lancet*.)

processes. Parallel with this median line, two other vertical lines 2.9 cm. to either side are drawn, and, at a point corresponding with the space between the transverse processes, a transverse line is projected at right angles to the midline. The intersection of the transverse and lateral vertical lines marks the points at which the needle is introduced. After the location of the first intertransverse space has been identified by the successful injection of one nerve, as many more transverse lines as there are nerves to be injected are projected at a distance of 2.5 cm. above or below the first point of injection.

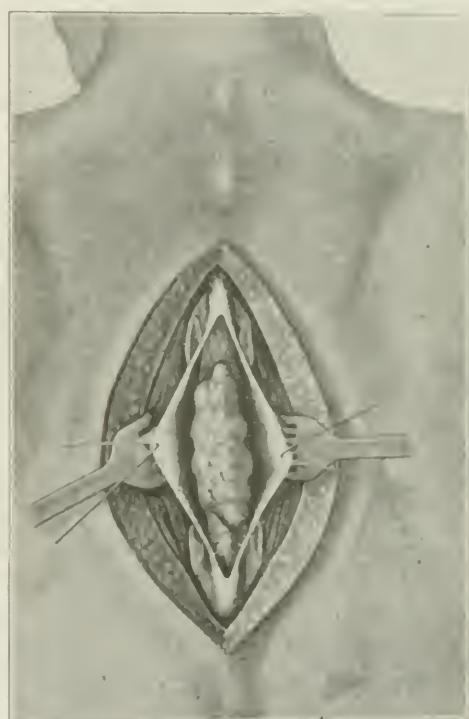


Fig. 2. Small round cell sarcoma removed by laminectomy under local and regional anesthesia. Pyelonephritis, albumin, casts and pus in urine and myocarditis with displacement of the heart into the right thorax were present in this extremely emaciated and enfeebled patient. The second, third, fourth and fifth posterior vertebral arches had to be removed to permit enucleation of the tumor mass. (Courtesy of Dr. A. C. Strachauer of Minneapolis, Minn., and *The Journal-Lancet*.)

jection is intra- or endoneurial or perineurial. In the average case, where four laminae are to be removed, some 80 mils (Cc.) of the analgesic solution may be required.

Sawyer, in his studies on the cadaver, injected, with the needle, an alcoholic solution of methylene-blue directly into the nerve-root; but, on no occasion, was a trace of the staining fluid found either within

the dural sac or the cord, and he concluded that the possible danger of the analgesic solution reaching the cord directly or indirectly is a remote one.

Muraya also has made the relative toxicity of paravertebral and subcutaneous injections the subject of experimental investigations. Using a procaine solution stained with methylene-blue, Muraya discovered the dye in the urine in from ten to 29 minutes after paravertebral injections. To safeguard the patient, Muraya advocates the use of adrenalin for delaying absorption of the anesthetic and a 5-percent gelatin-saline solution in order to delay diffusion.

Supplemental Anesthesia

Frazier warns, that, as with regional methods elsewhere, owing to anatomical variations and other considerations, the intensity of the anesthesia may not be complete enough in all cases to permit conducting the operation throughout without pain. Under such circumstances, supplemental injections of procaine solution must be made, especially in the removal of the spinous processes and laminae, when the needle is introduced directly into the periosteum. Or, if need be, at this stage, nitrous-oxide-oxygen anesthesia may be resorted to for a few moments.

After the spinal canal has been opened, subsequent manipulations may necessitate recourse to other methods of anesthesia according to the object to be attained. In the removal of tumors attached to the roots or in division of the posterior roots, Frazier has found the application of stovaine on a pledge of cotton effective. Impressed with the fact that manipulation of the posterior roots played an important part in the production of shock, Frazier introduced the stovaine (anesthaine) block during laminectomies under general anesthesia, and he has found it equally as serviceable to supplement regional procaine-anesthesia. A thin pledge of cotton moistened with a 0.4-percent solution of stovaine (anesthaine) is brought in contact with the cord and roots at the level of the operation.

Differential Utility of Regional Anesthesia

Regional anesthesia is useful chiefly for operations in the thoracic region of the spine. While Braun has applied it in the

cervical region, Frazier doubts the safety of the practice, because of the proximity of the phrenic center to the level of injection.

Infiltration-anesthesia answers every requirement in the cervical segment, and is especially gratifying when tuberculosis is a complicating factor. Laminectomies in the lumbar region may be more readily performed under spinal anesthesia, as the procedure is less difficult and only one insertion of the needle and a single injection are required, instead of eight or ten for the regional method. Spinal anesthesia thoroughly obtunds the posterior roots—another valuable advantage. Operations on the spine, including injuries to the cervical cord, should be done under procaine-anesthesia, as the accompanying paralysis of the accessory muscles of respiration predisposes the patient to pulmonary congestion if etherization is done instead. By utilizing local and regional procaine-anesthesia, Frazier considers that the mortality of exploratory laminectomy, in itself, is no more dangerous than is an exploratory laparotomy.

Surgical Pointers

Other important points to be observed are: an ample exposure, implying the removal, in the first instance, of an adequate number of laminae; X-ray identification of at least one lamina before beginning the operation, so that the opening corresponds precisely with the location of the lesion; coffer-damming with cotton the spaces on either side of the dural flaps, to prevent drops of blood from gaining access to the dural sac—a potential factor in postoperative adhesions; the gentlest manipulation of the cord or roots, and the *stovaine (anesthaine) block* as a prophylactic against shock; minute closure of the dural incision with fine needles and silk, to prevent the escape of cerebrospinal fluid; and careful juxtaposition of each layer-muscle, muscle-sheath, and intervertebral aponeurosis, together with superficial fascia—to ensure maintenance of function and the avoidance of disability after the removal of spines and laminae. Observing these essential features, laminectomy may be resorted to with anticipation of the patient's recovery in all but exceptional instances.

Dietotherapy in Diseases of the Pelvic Bowel

By CHARLES J. DRUECK, M. D., Chicago, Illinois

Associate Professor of Rectal Diseases, Post-Graduate Medical School
and Rectal Surgeon to Peoples Hospital.

PATIENTS suffering from disturbances of the terminal bowel that, perhaps, can not be cured may be made much more comfortable in their misfortune by a careful consideration of their foods, thus preventing intestinal autointoxication; yet, a wholesome nourishing diet being provided. Thus meat once a day may be allowed, also a variety of fruits and of fresh green vegetables. However, the following articles of food should be rigidly eliminated: fats, purely starch dishes, rich gravies, sauces, custards, patties, hash, recooked meats, and all highly seasoned foods. For postoperative patients, also, careful dietotherapy must be prescribed. We are prone to be overengrossed with the pathology of the disease under consideration or with the technic of the surgical procedure performed, and thus to forget the patient, himself, and his disturbed metabolism. This disturbed physiology will, of course, vary with each patient while a suitable dietary may be an important adjuvant to the treatment.

Our patient convalescent from a rectal or other pelvic operation must be able to rest quietly and should not be allowed to suffer pain, lest cardiac depression and exhaustion occur. Circulatory equilibrium must be maintained and a properly well-balanced diet provided.

The organs concerned in trophodynamics must be coaxed into the greatest efficiency possible under the handicap left by the disease or the injury. In diseases of the rectum, the diet must be suitably modified according to the gravity and character of the conditions encountered and the capacity of the organs of digestion, assimilation, and excretion.

The victuals must be changed from day to day, while such physical aids as massage, fresh air and change of environment must be provided. Following all surgical procedures in which shock is evidenced, the stomach partakes of the general debility, so that the patient is, for the time be-

ing, a "dyspeptic" and must be fed accordingly. If there is any question as to whether stimulants are indicated or not, it is best to exclude all alcohols. A very common cause of interruption of the progress of convalescence is, the allowance of an excess of food, which may cause a rise of the temperature, vomiting, and even purging, in nature's effort to rid itself of the surplusage.

Some of the Conditions Involved

Abscess and Fistula.—Individuals who have suffered continued emaciation, as in ischiorectal abscess, fistula or ulcer, are deficient in fat, albumin, and mineral matter and the anemia demands our attention first after an operation. The liquid diet necessarily will be milk, either raw or cooked, plain or mixed with vichy or lime-water, buttermilk, beef-tea, soup, egg drinks and various jellies; later adding fruit-juices, eggs, cereals, honey, sweetened jams, and very ripe fruits, particularly grapes. Proteins are allowed more cautiously, lest they incite indigestion, only carefully allowing fish, sweetbreads, chicken, game, squab, later adding minced beef, eye of tenderloin chop or a small slice of very tender beefsteak. These should be eaten slowly and well masticated.

Mineral salts are indispensable for all convalescents and especially following the loss of blood. Milk and meat-broths or grated raw meat are rich in the phosphates of potassium and in salts of magnesium. Powdered casein added to broth enriches its content of phosphorus and calcium. Bread, milk, and vegetable purées and decoctions of oats and barley introduce these salts in a most assimilable form. Bordeaux wine or Burgundy at this time acts as a light ferruginous tonic.

Constipation has been termed the bane of modern civilization and diet is a prominent factor in its causation. An albuminous diet consisting of meat and eggs with avoidance of vegetables, butter, and fat

tends to constipate. Lauder Brunton (Sutherland's "Diet and Dietetics") found that many individuals go two weeks without having an evacuation of the bowels, especially those that lived upon a dietary of fine white bread, butter, and tea, foods that leave very little residue. Individuals with defective teeth can not thoroughly masticate their food and, therefore, select such articles of diet as require little chewing, and, for this reason, often become constipated. The excretions of the alimentary tract, when not properly voided, are absorbed and thus give rise to various disturbances. To avoid this difficulty, the diet must not be too completely digestible, but, should contain seeds, cellulose or vegetable fiber that promote peristalsis.

Hertz ("Index of Treatment") declares that, for the rational treatment of constipation, it is necessary to distinguish between the two great classes of cases: (a) that class in which the passage through the intestines is delayed, while defecation is normal: intestinal constipation; and (b) that in which there is no delay in the arrival of the feces in the pelvic colon, but, their final excretion is not adequately effected; pelvic rectal constipation, or dyschezia.

The mechanical stimulation to peristalsis and evacuation depends upon the direct irritation by the undigested food and upon the distention produced by the bolus.

The intestinal juices and bacteria are increased by vegetable foods containing much cellulose, by sugars, organic acids, and fats, as also by a sufficiency of water and the avoidance of astringents. Olive-oil is valuable in the treatment of constipation, but, liquid paraffin is probably more satisfactory, because its action is entirely mechanical. Not being absorbed, it does not disagree with the stomach as vegetable oils are liable to do if taken for a considerable time. It may be given in doses of one dessertspoonful in an ounce of cream one-half hour before meals.

Colitis, Sigmoiditis, Proctitis, are names for one and the same condition, only respectively more accentuated in a specific portion of the large intestine, and which may be modified in individual instances. In every case, however, it is important to keep the bowel empty, for which end, in acute cases, the patient should fast, but not avoiding water, for the first forty-eight

hours, and then take only albumin-water for the next forty-eight hours. Following this, citrated milk (2 grains of sodium citrate to each fluid ounce of milk) or milk peptonized, to prevent curdling, or barley-gruel may be given in small quantities every hour. One and one-half pints per day may be allowed. Patients suffering from acute colitis should remain in bed and keep warm.

Chronic types of proctitis or colitis are more complicated conditions, in which constipation is nearly always a factor, and the patient will not be cured until the constipation has been overcome and the bowels kept empty.

Ulceration of the terminal bowel may be owing to tuberculosis, cancer, typhoid fever or dysentery, or it may result from some unrecognizable cause. Its treatment is very difficult. Citrated milk with eggs beaten into it is very acceptable. Three pints of milk with two eggs to each half pint of milk may be given in the twenty-four hours; barley- or rice-gruel, chicken-soup, mush, butter, and cream also may be given.

Pruritus ani sometimes results from improper alimentation, and always a consideration of the dietary is well rewarded. In planning the patient's diet, it is important to exclude alcohol, tea, coffee, and tobacco. The bowel must be emptied by means of enemas or other suitable measures. Prohibit all articles of diet known to produce itching, notably eggs, fish, cheese and strawberries. A rice or milk diet should be given a trial or, also, a mixed diet of well-cooked plain food, such as vegetables, greens, and fruits.

Diet After Operation

Postoperative feeding is an accomplishment in which but few are talented. The most important item of a hospital-diet is, the tray itself, and, about this, is demonstrated the ability of the nurse to devise and arrange the dishes supplied artistically and, by neatness and daintiness, to appeal to the fickle appetite of the sick. The "psychic stomach" is no less important than the anatomic stomach.

The patient operated upon under a local anesthetic will desire food at once and more generously than will a patient that underwent the same operation under inhalation-anesthesia. The postanesthetic, postoperative thirst of many patients, call-

mg for the dilution of the acids that either are retained or are being formed at an excessive rate, is not fully appreciated and, hence, the administration of water to the individual usually is neglected or mismanaged. My patients receive a tumblerful (6 ounces) of water every hour, from the time they enter the hospital up to four hours before the time set for operation. Nothing is given by mouth, during the last four hours, if a general anesthetic is given, because water taken by mouth may accumulate in the stomach and be rejected.

Postoperatively, after undergoing a pelvic operation, the patient may receive water as soon as he desires it, and, as soon as assured that the stomach is retentive and that peristalsis is progressing normally, liquid diet may be allowed.

Hemorrhoids are not affected (cured) directly by dieting; still, many individuals are much relieved by paying attention to what they eat. Hemorrhoids occur more frequently in heavy eaters and drinkers and very often attacks are brought on by large meals and by the use of alcoholics. Therefore, the diet should be contrived to obviate gastrointestinal congestion. The meals should be small and simple, alcohol-

ies shunned, tea or coffee taken in limited amounts, spices and condiments eliminated, and water drunk freely, also milk, if well tolerated.

The following plan of a day's menu will serve as an outline, this to be modified according to the individual patient's habits and the seasons of the year:

BREAKFAST.—Fruit, (one orange or a bunch of grapes, or one-half of a large grapefruit, or a baked apple or a dish of cooked fruit, such as prunes, peaches, apricots); two slices of crisp bacon or two eggs, with two muffins or gems, or slices of toast with butter; or a dish of porridge with cream; and coffee, either black or with cream and sugar.

LUNCH.—A bowl of vegetable soup or puree, with crackers; a sandwich, or two rolls with honey; a glass of buttermilk or fermented milk.

DINNER.—A bowl of soup; one lamb-chop or a similar amount of beef or poultry; two slices of bread; one potato; a salad; green vegetables, such as spinach, stringbeans, asparagus or cauliflower; a dish of pudding (rice, chocolate, gelatin or tapioca) eaten with fruit or a fruit-sauce.

Notes on Meningitis

With Clinical Report on 5 Cases

By HYMEN I. GOLDSTEIN, M. D., Camden, New Jersey

[Concluded from May issue, page 360.]

Acute Anterior Poliomyelitis

In Heine-Medin disease, or, the meningeal form of acute anterior poliomyelitis, meningitis may be caused by the localization of the infantile-paralysis virus. Netter believes this type to be frequent in France and that it may be mistaken for cerebrospinal meningitis. The symptoms of Heine-Medin disease include vomiting, sometimes for forty-eight hours, followed by rigidity of the neck, with flexion of the head. The patient may be soporous. The ankle-jerk is diminished. Macewen's, Brudzinski's, and Kernig's signs may be present. These symptoms and signs point to meningeal irritation and may be owing to cerebrospinal meningitis or other forms of pyogenic leptomeningitis, tuberculous

meningitis, the meningeal form of poliomyelitis or simply to a meningismus. The diagnosis must be based chiefly upon blood-culture and spinal-fluid examinations and tests.

Josephine Neal, in October, 1916, before the New York Academy of Medicine, dwelt in detail upon this subject. She stated that, in the early stages of poliomyelitis, the cerebrospinal fluid is clear, except in a few rare instances, in which it is very slightly cloudy. It often shows a good fibrin-web formation. There is a slight or moderate increase of albumin and globulin, together with a prompt reduction of Fehling's solution. The cell-count is increased, and, as a rule, 80 percent or even more of the cells are mononuclears, the polynuclears occasionally predominating when the fluid is slightly cloudy.

There are certain large mononuclear cells present in poliomyelitis-fluid that are more or less diagnostic.

In the early stages of ordinary meningitis, the fluid shows varying degrees of cloudiness. The increase in globulin and albumin ordinarily is greater than that which occurs in poliomyelitis; also, there is less reduction of Fehling's solution. Lastly, the cells in the spinal fluid of purulent meningitis are largely polymorphonuclears and the meningococcus can usually be found after repeated careful search; in some mild cases, though, it never is present. In meningitis caused by other organisms, you can virtually always find them sooner or later in stained smears of centrifuged specimens and in cultures of the spinal fluid. Netter attaches importance to a complete loss of the knee-jerk at a very early stage of poliomyelitis, and to the presence of severe pain and tenderness in the legs—which, he declares, is especially marked in the meningeal type of the disease. Neal asserts that, in some of these cases of poliomyelitis, the spinal fluid can be differentiated from tuberculous meningitis only by means of animal-inoculations. Paralysis, in due time—in the second or third week at most—even if limited to the ocular or facial domain—occurs, as, also, probably, in one or more of the extremities. A monkey might be inoculated with some of the cerebrospinal fluid, to learn whether the animal acquires the Heine-Medin disease.

Encephalitis Lethara

Lethargic encephalitis (Nona) has been studied by MacNalty, Netter, Economo, Marinesco, Wilson, Findlay, and others. It is characterized chiefly by lethargy or stupor and symptoms indicating lesions in and about the nuclei of the third cranial nerves. Often there is fever, 101-102°, in early stages; the temperature then may be subnormal. The progressive lethargy is the most important differential point. Headache, vertigo, and ophthalmoplegia, and diplopia occur. The cerebrospinal fluid has been negative for microorganisms. Some increase in cell count occurred in some of the reported cases. Ophthalmoplegia was observed in 75 percent of the English cases.

Bassoe and Neal and Pothier have associated this condition with influenza.

The presence of cases in epidemic form, associated with the above characteristic

symptoms would aid in establishing the diagnosis.

Meningitis Sympathetica

Meningitis sympathetica, a condition occurring when there is inflammation near the meninges. (I. Strauss.) In this class of cases, Strauss reports the fluids as showing an increase in pressure and in the albumin and globulin content, and cellular elements (polymorphonuclears); fluids are sterile. No diminution in the reduction of Fehling's solution occurs. If the fluid is cloudy, it is due, of course, to an inflammatory focus in the neighborhood of the meninges (Neal), and the presence of a focus of infection when found near the meninges helps to make the diagnosis more certain.

Cautions and Suggestions Anent Lumbar Puncturing

Before discussing the prognosis and treatment of meningitis, it is essential to have some clear knowledge as to the cerebrospinal fluid itself, and of the effects of lumbar puncture.

Normally, the cerebrospinal fluid is, for the most part, a secretory product of the choroid plexus. Some may be derived also from blood-vessels of the nervous tissues and probably also from the pituitary and pineal glands (John A. Kolmer).

The choroid plexus is the main guardian against infection of the tissues of the cerebrospinal system, although its defensive powers are easily disturbed. Flexner and Amoss have shown that the intraspinal injection of sterile horse-serum or even simple spinal puncture, accompanied by some loss of blood, is sufficient greatly to reduce the resistance of the tissues to infection with poliomyelitis virus. Kolmer asserts that lumbar puncture alone may so disturb the choroid plexus or other mechanism of defense of these tissues against infection as to favor infection of certain micro-parasites in the blood. Aseptic conditions and a suitable needle are of first importance. The pain produced during puncture can be prevented by preliminary infiltration of the tissues, along the passage of needle, by 0.5 to 1 mil (Cc.) of a sterile 1 percent solution of eucain, and avoiding undue force. Arching of the back widens the intervertebral spaces. After the puncture, rest in the prone position for an hour or two, will avoid headache and vomiting.

The pressure of the cerebrospinal fluid varies directly with the pressure of the

venous sinuses, and it oscillates with coughing, forced respiration, crying, and muscular movements. The pressure is four or five times higher when the patient is sitting up than when in the recumbent position on the left side. In children, according to Quincke, the normal and also the pathologic pressure of the cerebrospinal fluid is about one-third less than in adults.

Kolmer recommends the use of the mercurial manometer and of the Landon technic, with the adult patient lying on his left side and being quiet; the normal varies between 6 to 10 mm. of mercurial column; average 8 mm.; 12 to 20 mm. of mercury or higher denotes a pathologic condition. Pressure is increased in acute and chronic (especially the former) forms of meningitis owing to tuberculosis, meningococcal infection or poliomyelitis-virus.

A marked decrease in the dextrose content of the cerebrospinal fluid occurs in the acute infectious meningitides; in meningococcus-meningitis, the fluid even may fail altogether to reduce Fehling's solution. In acute meningeal congestion or simple "serous meningitis" or meningismus, the amount of dextrose usually is unchanged. In the acute suppurative meningitis-cases, the increased number of bacteria and the large number of cellular products of inflammation—the red and white blood-corpuscles—consume or absorb a portion of the dextrose.

Fehling's or Bang's micro-method may be employed for the dextrose estimation:

Chloride: Normally, there is present 0.725 to 0.750 percent of sodium chloride in the cerebrospinal fluid. There is a marked reduction of the chloride in tuberculous meningitis, to as low as 0.5 percent, and, in acute purulent meningitis, to 0.6 percent. In subacute or chronic meningitis, the reduction is much less.

Cytology: Normally, the cerebrospinal fluid contains a very few cells, the number varying from 0 to 8 per cubic millimeter of undiluted fluid; 15 cells being a definite increase, or "pleocytosis". (These usually are small lymphocytes.) The number as stated above is greatly increased in infective meningitides. The Fuchs-Rosenthal counting-chamber generally is recommended for counting the cells.

The Weil-Kafka Hemolysin Reaction: This is based upon the fact that, in suppurative meningitis, the disintegration of leukocytes furnishes various substances of a bacteriolytic nature; and complements

may be present. Also, that in cases of acute meningeal involvement, there occurs a greater transudation of serum or a hypersecretion of the fluid, and a decrease of selective infiltration, with the result that antibodies are more readily transferred from the blood to the cerebrospinal fluid; and, therefore, we find an increase in the anti-sheep-hemolysin in the cerebrospinal fluid, and, in meningitis, this is present. Over 90 percent of individuals show natural anti-sheep-hemolysin in the cerebrospinal fluid, and, none in the normal cerebrospinal fluid.

Meningitis may exist without temperature or leukocytosis, and would have to be differentiated from hysteria; but, it cannot be diagnosed unless headache, changes in the cerebrospinal fluid, eye symptoms (ptosis, squint, etc.), and retraction of the neck are present (R. C. Cabot).

Stained Blood Films. In the *Journal A. M. A.* of December 21, 1918, p. 2048-2050, W. W. King, describes the history of a case of cerebrospinal meningitis, in which the early diagnosis was made by the examination of stained blood films. A slide was stained with Leishman's stain. A second slide was stained by the Gram method controlled by the simultaneous staining of a known gram-positive coccus, and the diplococci in the blood film were seen to be gram-negative. Blood cultures were negative with blood obtained post mortem.

Prognosis and Prophylaxis

Prognosis.—This is based upon the following signs of improvement after serum-treatment:

1. Improvement in the consciousness of the patient.
2. Drop of the temperature to nearly normal.
3. Diminution of the intensity of the headache.
4. No decrease nor marked increase of the pulse rate.
5. No increase of the rigidity of the neck.
6. Decrease in the globulin content of the cerebrospinal fluid.

Many young infants do not respond to serum-treatment as well as do older children and adults. Cerebrospinal meningitis, everything being equal, is more fatal in adults than in children. Netter and L. E. Barker believe that antimeningococcic serum should always be used when there is any suspicion of meningococcus meningitis; not waiting for a positive diagnosis based upon a bacteriologic study of the fluid obtained by lumbar puncture. According to Osler, meningococcus meningitis is the only form of meningitis in which

recovery takes place, after treatment, in 50 to 75 percent of the cases.

Tuberculous meningitis practically is hopeless. The repeated removal of the fluid from the spinal canal and the consequent decrease of pressure, however, is beneficial. The serum (sterile horse-serum or Flexner's serum) may be injected, in the hope that a mistake may have been made in the diagnosis, as to the form of meningitis, or else urotropin in saline solution may be tried intraspinally. John Lovett Morse regards these cases as absolutely hopeless.

Prophylaxis.—The isolation of the patients is recommended, especially in camps or other places where many men are brought together. Regarding the isolation and proper treatment of meningococcus "carriers": Disinfection of the nasopharynx, swabbing out the upper air-passages with various mild antiseptic solutions, such as compound thymol solution, or argyrol, are recommended. Sophian and Black state that the injection of dead meningococci may confer considerable immunity.

In an article, titled "Meningitis at Camp Greene," contributed by Capt. Paul G. Woolley to *The Journal of Laboratory and Clinical Medicine* for April, this statement is made: "In the only organization which made use of systematic nasal sprays since the first of the year, not a single case [of meningitis] developed, and in those organizations in which sprays were resorted to after the appearance of the disease, no other cases appeared." The spray employed at this camp was dichloramine-T.

Virtually, the same method of treatment was employed by Maj. Carey P. McCord, Maj. Alfred Friedlander, and Capt. Robert C. Walker, at Camp Sherman, in the treatment of diphtheria and meningitis, according to an article published in the July 27 issue of *The Journal of the American Medical Association*. They state that, in the treatment of these carriers, they introduced the use of chlorazene. They employed "an aqueous solution of 0.025-percent strength, used as a gargle three or four times daily. In certain cases, the application was made by throat-specialists, to insure the reaching of remote points in the nasopharynx. The gargling was followed by an oil-spray of dichloramine-T of 2 percent strength."

The combined use of aqueous chlorazene solution and the oil-solution of dichloramine-T promises to be of utmost value, not

only in preventing diphtheria and meningitis, but, also, as a prophylactic in pneumonia, measles, streptococcic sore throat, and the other diseases originating in the nasopharyngeal tracts, such as influenza,

The Treatment

Medicinal Treatment.—Bromides may be given for insomnia and delirium, either by mouth or rectum; chloral may be added. Dial (Ciba) or barbital may be used. Caffeine may be given if stimulation is necessary. Strychnine should not be used. Whisky or brandy may at times be of value (as an aid to nutrition). Ergot and iodides are of no value in cerebrospinal meningitis. Helmitol, or hexamethylenamine, may be given, even intraspinally, especially in the fatal forms of cerebrospinal meningitis, for which no specific therapy has yet been found, this including the tuberculous, pneumococcus and streptococcus forms; also in those epidemic forms "resistant" to serum-therapy.

When pain is severe, morphine or heroin may be used—fairly large doses being required. However, if pain can be controlled in any other way, it is better to avoid the use of morphine, as some of these patients are extremely sensitive to the depressing action of this opiate. The bromides frequently will control the pain of meningitis efficiently, with or without the addition of cannabis indica. In very resistant cases and when the patient's condition is very serious, the cerebral ventricle should be tapped, after trephining the skull, and the drawn serum injected into the ventricles. This can be done much more easily in infants and young children, as a last resort.

In tuberculous meningitis, we have no specific therapy. This is the most frequent of all the bacteriologic types of cerebrospinal meningitis and mostly is regarded as an absolutely hopelessly fatal disease. Frequent repeated lumbar puncture is the only hope.

Lumbar puncture is made, usually, between the third and fourth lumbar vertebrae, "one-half inch to the right of median line," and the needle is directed slightly inward and upward. The needle should enter the spinal canal at a depth of 2 or 3 cm. in children and at 4 to 6 cm. in adults.

Jacoby, (*New York Medical Journal*, 1895), suggests that where the meningitic process is confined to the cerebrum, drain-

ing by the lumbar puncture may carry the infection down the cord and thereby extend the disease. It is impossible from the lumbar extremity to force fluids of a therapeutic character into the arachnoid spaces above the cervical region, unless puncture is also made into the ventricular space of the brain, when the fluid passes very readily from one end to the other of the cerebrospinal meningitis. Jacoby advocates flushing of the cerebrospinal axis by means of both the lumbar puncture and a small trephine opening, with drainage from the lateral ventricle.

Charles H. Dunn recommends immediate lumbar puncture in every case in which epidemic meningitis can not be excluded.

Serum-Therapy.—It must be remembered that antimeningitis-serum is a specific immune-serum, and is of value only in that form of cerebrospinal meningitis that is caused by the Weichselbaum diplococcus, and is useless in any of the other forms of cerebrospinal meningitis. Moreover, it is valueless when given subcutaneously. Of late, some men have been using the serum intravenously exclusively or alternately intraspinally and intravenously in daily injections. The earlier in the course of the disease the serum is administered, the better are the prospects of success.

Antistreptococcic, antipneumococcic, and antiinfluenzal serum can now be obtained for use in the forms of meningitis owing to these specific organisms. Staphylococcic meningitis may be treated by means of vaccine-therapy. An autogenous, or homologous, vaccine is preferable, still, if not obtainable, a stock vaccine may be used.

Dunn recommends the daily injections of serum as long as diplococci can be found in the cerebrospinal fluid. The amount of spinal fluid withdrawn should always be somewhat more (5 to 10 mils) than the amount of serum injected. The average dose for an adult is 30 mils, but, in very severe cases, in which the fluid escapes readily, as much as 60 mils may be given. As a rule, it is given once in twenty-four hours, until the temperature is normal and the fluid practically clear. In severe cases, it may be given every twelve hours.

Doctor Niles, of New York, emphasizes the importance of keeping a high concentration of the serum, continuously in the subarachnoid space. In the average case, 4 to 6 doses are required, in some, however, many more than that. The number of cells

in the spinal fluid often is increased after the first injection of the serum, because of the irritation of the meninges produced by the horse-serum. It is only transitory, though, and the fluid gradually becomes clear. In cases where there is a bacteremia, 50 mils of serum is best given also intravenously. Dunn states that the persistence of Kernig's sign, rigidity and tenderness of neck, retraction of head or abnormalities of reflexes, in favorable cases, is not serious and in itself does not call for further injections. If, after 4 or 5 injections, there still is some fever and persistence of headache, hyperesthesia, or any affection of consciousness—such as delirium or apathy—the injections of serum had better be continued. Four injections, even in mild cases, usually are recommended, and, should the diplococci reappear in the spinal fluid (after once having disappeared, with improvement at any time while under treatment), another series of 4 injections should be given.

McKenzie and Martin have introduced the use of an autogenous serum. They withdrew the blood-serum of a patient suffering from meningitis and inject it into the spinal canal of the same or some other patient. This is an active bactericidal fluid.

G. Marchetti (*Rivista Critica di Clinica Medica*, Florence, June 1, 1918, 19, No. 22) recommends, and has tried in 11 cases, the injection of the antimeningitis-serum, one day by vein, the next intraspinally, continuing the injections in this way. All the patients recovered, with one exception. This case was complicated with malaria and the patient was very weak. (*J. A. M. A.*, Aug. 3, 1918, p. 412).

W. W. Herrick (*J. A. M. A.*, Aug. 24, 1918), at Camp Jackson, recommends the intravenous route for the serum-treatment. He makes from four to eight massive injections (of from 80 to 150 mils) into the vein, during the acute stage, in a period of from two to four days.

Desensitization is accomplished by the subcutaneous injection of 1 mil of serum one hour before the introduction of the serum into the vein and the cautious injection of the first 15 mils at the rate of 1 mil per minute. If dyspnea, cyanosis, pallor, vomiting or irregular pulse appear, the injection must be stopped.

Herrick concludes that the average case requires from 400 to 600 mils of serum by vein and about 100 mils by spinally. 265

cases were treated and studied. Blood-culture was positive in one-third of the cases, showing that there was a true septicemia, or meningococcemia, in a large number of the cases. 4 percent of meningococcus (blood) infection have not shown meningitis, and the serum (intravenously) rendered the blood sterile.

If meningococcus meningitis is a metastatic, or secondary, local infection and inflammatory focus, the primary stages of the disease, the sepsis, or bacteremia, should be recognized and treated. With the combined intravenous and intraspinal treatment, the meningococci are not found in the spinal fluid after the first forty-eight hours! In the 1904-5 epidemic, the mortality in New York City was 70 percent. Paralyses, defective sight and hearing or mental impairment often followed as a sequel. Since the serum has become the main means of treatment, the mortality is only 18 to 25 percent. In cases showing a tendency to become chronic, autogenous vaccines are given in all cases by the New York department of health.

Vaccine therapy is recommended, even in meningococcal meningitis, by Florand and Fiessinger (July 15, 1918, Paris)¹ and Netter states that intramuscular injection of the serum often proves useful to supplement the intraspinal in case of meningococcus septicemia, and Netter also had encouraging results with vaccine therapy in cases rebellious to serotherapy.

In the *J. A. M. A.*, page 76, January 12, 1918, vol. 70, George H. Weaver, of Chicago, advises the use of a face-mask as of great protective value in the prophylaxis of meningitis, pneumonia, and diphtheria. He suggests that the gauze mask be used by physicians, nurses, orderlies, et cetera, and both in hospitals, camps, and households. This mask (sprayed with dichloramine-T in chlorinated oil) is useful in influenza.

It is advisable to wear a properly made gauze face mask—one which would also prevent infection through the eyes (lacrimation, etc., carrying infection into the nose). This eye, nose and mouth protector is a useful precaution in influenza, pneumonia and meningitis, as well as other infections.

Dr. Josephine Neal states that where organisms persist in cases of epidemic men-

ingitis it is well to use autogenous vaccine. In an adult, it is quite safe to begin with a dose of one billion, and to continue with increasing doses up to 4, 6, 8 and even ten billion.

Emphasis is also laid by Dr. Neal on the importance of continuing the administration of serum. In one case she used 28 injections of serum along with vaccine, with recovery.

Cerebrospinal Meningitis Secondary to Some Hematogenous Infections

E. M. Medlar, (*J. A. M. A.*, February 16, 1918, 458), at Camp McClellan, concludes, and agrees with Major Herrick, that epidemic cerebrospinal meningitis is not primarily a meningitis, and that all meningitides, exclusive of traumatic meningitis and brain abscess, are secondary to hematogenous infection. It is probable that, if seen early enough, all cases of meningococcal meningitis would yield positive blood-cultures.

Herrick, (*J. A. M. A.*, January 25, 1918, vol. 70, No. 4, p. 227), emphasizes the fact that epidemic meningitis is primarily a generalized systemic invasion by the meningococcus—a sepsis—with possible secondary involvement of the meninges, joints, endocardium, pleura, tonsils, et cetera. Diagnosis in the stage of meningococcal sepsis may be made many hours before the meningococcus has time to exert its characteristic selective action upon the meninges. In this stage of sepsis, before meningitis develops, it is important to administer intravenously antimeningococcal serum, in doses of from 30 to 60 mils, every twenty-four hours during the first three or four days, and then, if meningitis-symptoms set in, the intraspinal injections also should be made.

Dangers of Intraspinal Injections

The dangers of intraspinal injections are as follows:

1. Anaphylactic shock. This can be avoided by giving a desensitizing dose, subcutaneously, before proceeding with the intraspinal injection.

2. Cardiac or respiratory symptoms may appear while making the injection. If so, stop, and drain off a few mils of serum. Artificial respiration and circulatory stimulants may be resorted to. This accident is rare if the serum is administered by gravity, which is the method recommended. A polyclonal serum and one of high potency

¹(*Bulletin de la Société Médicale des Hôpitaux*, Paris, July 15, 1918.)

should be employed. The New York department of health prepares its own.

In *The American Journal of Medical Sciences* for July, 1918, (p. 105), McConnell, Morris, and Seehorn, of Camp Pike, Arkansas, report the results of their study of 30 cases of meningococcic cerebrospinal meningitis (*J. A. M. A.*, p. 598, Aug. 17, 1918). The order of frequency of symptoms was:

(1) Profound frontal headache (2) stupor or coma, (3) rigidity of neck, (4) vomiting—was projectile, or cerebral, in type and coming on without previous nausea and without warning, (5) Kernig's sign, (6) increased knee-jerk, (7) hyperesthesia, (8) slow pulse, (9) petechiae, (10) slight increase in temperature.

Strabismus was not present as an early symptom. The headache was very severe in character, much more marked than in typhoid fever, and nearly always was frontal. Kernig's sign was plus in nearly every case. The knee-jerk was exaggerated in most of the cases, as was the plantar reflex. Babinski's sign was absent. Hyperesthesia was marked, and at times a plus "tâche cérébrale." The pulse in nearly every case was slow, 60 or 70 or less. Herpes was a common symptom—present in practically all of the cases—usually most extensive on the lips at the mucocutaneous junction. The gravity-method was not employed by these men at Camp Pike. Instead, a Luer syringe of 40 mils

capacity was used, with rubber tubing for connection with the syringe and needle. The serum was injected very slowly. Doses of 40 mils were usually given at 24-hour intervals.

Adrenalin solution or epinephrin also may be used in conjunction with the desensitizing subcutaneous injection of serum prior to the intraspinal or intravenous serum injection.

Injection of Oxygen or Air

Ramond and Francois (*Bull. de la Soc. Méd. des Hôpits.*, Oct. 26, 1917, 41, No. 29), (*J. A. M. A.*, p. 348, Feb. 2, 1918, vol. 70, 4,) state that tuberculosis is essentially curable, especially when it involves serous membranes.

The injection of air has been found useful in tuberculous pleurisy and peritonitis, and Ramond has found it effectual also in arthritis, orchitis, and meningitis. After 40 mils of cerebrospinal fluid is removed by lumbar puncture (patient reclining), the air is drawn into a Roux syringe through a long redhot platinum needle. This sterilizes and warms the air. It is then slowly injected through the puncture-needle which has been left in place. The amount of air injected should not be over one-half or two-thirds of the amount of fluid withdrawn. The injection of air can be repeated for five or six consecutive days, or oxygen may be used for longer periods. Air or oxygen may even be injected into the lateral ventricles.

In our headlong rush after the new, the evanescent and the elusive, we have thrown aside such valuable therapy as suggestion, hydrotherapy and massage and as a result lost much of the devotion of our clientele and have driven many of them into the net of the quack and charlatan, who have arisen to the cry of the multitude who want something tangible done.—Dr. Edmond J. Mellville.

What Others are Doing

MOSQUITO EXTERMINATION

That the spread of malaria, malarial and yellow fever, and similar disease is directly traceable to mosquitoes is very generally recognized in medical circles and among sanitary engineers and officials of public departments of health and sanitation. Mosquitoes breed in stagnant water, and if these breeding places can be drained, the mosquito becomes extinct.

Upon the entrance of the United States into the war on Germany and her allies, the Government began building cantonments for the training of soldiers, and the engineers in charge of the work at several points found it necessary to do considerable drainage work—malarial control measures, they called them.

Swamp ditching is neither a pleasant nor healthful occupation. During the four years of war, it was practically impossible to hire men willing to do that kind of work, because they could readily get easier, healthier and better-paying employment.

The following report issued by the United States Public Health Service, however, gives, in an interesting and informative way, the views of U. S. sanitary engineers regarding an economical and effective method of drainage, which was up to the time of making the experiments reported upon new to them:

"In view of the present shortage of labor and the consequent high wages of laborers, considerable economies, both in the use of labor and in money outlay, may be effected in antimalarial drainage work by the use of dynamite, it has been demonstrated in the course of United States Public Health Service operations in the extra cantonment zone at Camp Wheeler, Ga.

"The best results were obtained in mucky areas where the mud was so deep and soft that hand excavation became slow and difficult. In these cases, the use of dynamite proved satisfactory.

"As an illustration of the savings effected by the use of dynamite, an analysis of

the costs of two adjacent ditches in a large swamp in the extra-cantonment zone may be of interest.

"Ditch No. 60 was excavated with dynamite. This ditch was 2,802 feet long, 12 feet wide at the top and 4 feet wide at the bottom, and averaged 5 feet deep. The number of cubic yards of material removed was 4,151.

"Ditch No. 62 was excavated by laborers with picks and shovels. This ditch was 3,591 feet long, 4 feet wide and 3 feet deep. The yardage was 1,596.

"The cost of excavation in the case of ditch 60 includes clearing out the ditch after it was dynamited. In the case of ditch 62 the cost of excavation includes the cost of a small quantity of dynamite used to facilitate the removal of large stumps.

"The costs of excavating each ditch, not including clearing, were as follows:

	Ditch 60	Ditch 62
Cubic yards.....	4,151	1,596
Labor cost.....	\$308.90	\$671.75
Cost of material.....	\$1,265.10	\$38.75
Cost of excavation.....	\$1,574.00	\$710.50
Cost per cubic yard.....	\$0.39	\$0.45
Man days at \$3.....	103	224
Man days per cubic yard.	0.024	0.140
Cubic yards per man day.	41.66	7.14

"It will be seen, therefore, that there was in this case a difference of 6 cents a cubic yard in favor of the use of dynamite. It is probable, however, that the cost of excavating ditch 60 by hand would have greatly exceeded 45 cents a cubic yard, owing to the very difficult nature of the soil—a mass of yielding mud, largely under water, in which it was almost impossible to stand up."

PREVENTION—KILL THE FLY!

The unremitting efforts of health-authorities for a number of years past have done much to instruct the public regarding the dangerous propensities of the house-fly, of feeding on infected and contaminated ma-

terial and then to transfer it to foodstuffs intended for human consumption. The agency of the fly in the transmission of, especially, typhoid fever, but, no less of other infectious diseases has been demonstrated many times. It is to be hoped that physicians have acted, and constantly are acting, in accordance with the information thus afforded.

While it is somewhat late to prevent the first breeding of the flies, this, still, can be hindered by taking proper care of garbage-cans, manure piles, and other places where filth is collected and which are favorite haunts of the dangerous house-fly for depositing its eggs. An important task, by the time this issue of CLINICAL MEDICINE reaches its readers, will be, to destroy those flies that are infesting the house, and, for this, The Merchants' Association's Committee on Pollution and Sewerage (New York) offers several effective recipes that originally were suggested by the United States government.

A formaldehyde-solution of approximately the correct strength may be made by adding 3 teaspoonfuls of the concentrated formaldehyde-solution, commercially known as formalin, to a pint of water. Similarly, the proper concentration of sodium salicylate may be obtained by dissolving 3 teaspoonfuls of the powder to a pint of water.

An ordinary, thin-walled drinking-glass is filled or partly filled with the solution. A saucer or small plate, in which is placed a piece of white blotting paper cut the size of the dish, is put, bottom up, over the glass. The whole is then quickly inverted and a dead match placed under the edge of the glass. The contrivance now is ready for use. As the solution in the saucer dries out, the liquid seal at the edge of the glass is broken, when more liquid flows into the saucer below. Thus the paper is always kept moist.

Any odor pleasing to man is offensive to the fly and will drive them away.

Take 5-cents' worth of oil of lavender, add to it an equal measure of water, put into an atomizer and spray the liquid around the rooms where the flies abound. In the dining-room, spray lavishly even on the table-linen. The odor is very disagreeable to flies, while being refreshing to most people.

The odor of geranium, mignonette, heliotrope, and white clover is offensive to flies.

They especially dislike the odor of honeysuckle and hop-blossoms.

According to some French scientists, flies intensely dislike a bright blue color. Decorating rooms in blue, will tend to keep out the flies.

Mix together one tablespoonful of cream, one of ground black pepper, and one of brown sugar. This mixture is poisonous to flies. Put into a saucer, darken the room except one window and in that window set the saucer. The flies, attracted by the light, will find the deadly drink there.

The fumes of burning insect-powder stupefies the flies; however, they must be swept up and burned, lest they revive.

For stables, barns, and out-of-doors: Borax is especially valuable around farms and out-of-doors. One pound of borax in 12 bushels of manure will be sufficient to poison the flies without injuring its manurial qualities for farm-stock. Scatter the borax over the manure and sprinkle with water.

Lye, chlorinated lime, green sulphate of iron, dissolved in water, crude carbolic acid or any kind of disinfectant may be used in vaults.

THE SUGAR-TREATMENT OF TUBERCULOSIS

It is some time since Professor Lo Monaco, of Rome, proposed the employment of cane sugar, in solution, for the treatment of pulmonary tuberculosis. Like all new methods, this was taken up enthusiastically and promoted energetically by some physicians. So far, we have refrained from referring to this treatment at all, being unable to enthuse over it.

There is, in the *Gazette des Hôpitaux*, for April 24, an interesting discussion by Professor Laumonier concerning the method referred to. It is pointed out that, from the first, Professor Lo Monaco had warned against exaggerated claims, asserting that the injections of sugar solution constitute a purely symptomatic treatment the action of which is manifested, especially, in the diminution or, often, suppression of expectoration, while it has no direct influence whatever upon the bacillus of tuberculosis. That is to say, it is not in any sense an etiologic, or causal, method of treatment.

Nevertheless, even with this limitation, injections of sugar solution may be of

actual value since, by drying up the lesions, they render, on the one hand, the existence and multiplication of the bacillus more difficult, while, on the other hand, they diminish the amount of sputum and, thereby, the possibilities of danger connected with it.

Unfortunately, even this fact seems to be inconstant, and subject to different opinion. Some authors confirm it, while others claim that they have never observed any appreciable diminution of the expectoration under this treatment. Professor Laumonier concludes that, if the apparent amelioration in the condition of the patient is due to the action of the sugar, and if the effect upon the expectoration is frequently absent, the treatment hardly has any other merit than to afford a variation in therapeutics and to serve as an encouragement to the patient.

CORPUS LUTEUM IN VOMITING OF PREGNANCY

Attention is called, by Dr. George Clark Mosher (*Jour. Mo. State Med. Asso.*, March), to the fact that Dr. John C. Hirst, of the University of Pennsylvania, has demonstrated the value of corpus luteum in vomiting of pregnancy.

Doctor Mosher reports on 5 cases of vomiting of pregnancy, in which all customary measures had proven unsuccessful, but, where corpus luteum, either alone or in combination with thyroid extract, helped to overcome the vomiting of the patients, all of whom were confined successfully at term.

The corpus luteum was administered hypodermically, in solution, 1-3 mil on alternate days, with 1-5 mil of thyroid extract on the succeeding days. This dose was increased to 1-2 mil of the corpus-luteum solution, while sometimes the thyroid preparation had to be omitted, because of an unfavorable effect upon the pulse.

CAUSES AND TREATMENT OF ECLAMPSIA

Dr. George Clark Mosher summarizes an interesting study of 48 cases of pregnancy-toxemia (*Jour. Mo. State Med. Asso.*, March) by saying that toxemia of pregnancy and eclampsia are a consequence of changed metabolism resulting from the ingestion of faulty protein or fat, from an undetermined toxin emitted

by the growing ovum, this giving rise to infarcts and other pathological changes of the kidneys, liver, thyroid gland, brain, and spleen. These toxins are thrown into the blood stream, the products of autolysis, of placental infarcts from which dying particles are carried to the kidneys, liver, and other vital organs, and cause focal necrosis. Hyperthyroidism is only an incidental evidence of this vicious circle.

The extra burden thrown upon the mother, by warding off this poison and by oxygenating the fetus, overwhelms her powers of resistance. Especially may this result in alternating extremely cold weather and mild days; she being unable to stabilize her powers of resistance. The destruction of the equilibrium between the centers and periphery of the body gives rise to acidosis, because of the unstable condition of the metabolism. Failure to eliminate results in stasis, decreased maternal oxygenation; lung expansion, and heart action are disturbed; asphyxia results; foci of infection (teeth, tonsils, colon) may usually be demonstrated in toxemia. The adrenalin output is increased, blood pressure is raised and blood coagulability abnormally increased in toxemia.

Consequently, prophylaxis, including diet, bland foods, and plenty of fluids, elimination by means of magnesium sulphate and sweats, and eradication of the foci of infection are strongly indicated; asphyxia is avoided by means of deep breathing and supply of fresh air; acidosis is anticipated by giving alkalis; blood pressure is reduced by the heroic use of veratrum, not, by resort to phlebotomy.

All other measures failing, the final resort is, to empty the womb. This should be done under ether-narcosis, ether being the only safe inhalation-anesthetic under these circumstances.

PREVENTION AND TREATMENT OF PUERPERAL ECLAMPSIA

In his interesting study of eclampsia already referred to, Dr. G. C. Mosher, of Kansas City (*Jour. Mo. State Med. Asso.*, March) declares that acidosis always is present in pregnant women that exhibit premonitory symptoms of toxemia and eclampsia. The failure to eliminate toxins sufficiently is a part of the generally insufficient elimination obtaining, and Doctor Mosher insists that magnesium sulphate is the best eliminant to be employed, be-

cause it assures complete removal both of the toxemia and acidosis.

Incidentally, the toxemia is encouraged by a diet containing much of fats and of proteid substances. These articles should be reduced to the possible minimum, only enough proteid being permitted to maintain proteid equilibrium. On the other hand, cereals and sugar may be given freely, likewise fruits. Instead of milk, buttermilk or whey often are acceptable. Lastly, much water—six, eight or ten glassfuls a day, is to be drunk.

In order further to overcome a retention-toxemia, it is advised that the colon be washed out each day with a 2-percent sodium-bicarbonate solution introduced in the knee-chest position. The blood pressure should always be observed and recorded; if it remains over 160, the patient is in danger. In this event, the careful administration of veratrum viride is recommended, in order to lower the blood pressure to safe limits. If this remains over 180 for even a limited period, the danger is serious and if the blood pressure reaches 200, the woman should be delivered without delay.

In eclampsia, chloroform is a dangerous anesthetic, as it induces toxic changes similar to those of the eclampsia, itself. It always should be replaced by ether or by morphine with hyoscine.

THE SANITARY CONDITIONS IN THE CITY OF LILLE DURING THE GERMAN OCCUPATION

The *Gazette des Hôpitaux* for February 8 prints an abstract of a communication from Professor Lemoine, of Lille, one of the larger cities in the French territory invaded by the German troops and which suffered all the terrors and hardships of the peculiar warfare waged by *Kultur*. We reproduce the abstract of Doctor Lemoine's description in literal translation because we deem it of interest to physicians generally.

Doctor Lemoine relates that famine

came on in Lille in 1916 and progressed rapidly during the succeeding years. It increased to such an extent that certainly nine-tenths of the city's population did not eat meat for more than two and one half years.

Even if this enforced abstinence caused a diminution in the diseases resulting from obesity and from good living or even if alcoholism and its dangers were lessened still, the want and physiological misery caused by insufficient nourishment have prepared the soil for a terrifying development of tuberculosis, such as became manifest, especially, in the spring of 1916. At that time, there occurred a veritable epidemic of acute tuberculosis, to which the patients succumbed in the course of one or two months. In addition to this form of tuberculosis, which almost may be called malignant, there were observed extremely numerous cases of tuberculosis of the cervical glands, in which suppuration took place rapidly. All therapeutic efforts were impotent. Moreover remedial measures that might have been employed were lacking, the pharmacies were empty.

It must be added that scurvy, pellagra, typhoid fever, and dysentery added to the terror of the tuberculosis and that nothing could debruit the rapid progress of these diseases; antidyseenteric serum, among other agents, unfortunately was not obtainable at the Pasteur Institute at Lille.

Aside from the infectious maladies, attention must be directed to a peculiar neuropathic state that became prevalent among the inhabitants of the city, this condition being characterized by irritability by a contentious spirit, insomnia, temporary amnesia and also a kind of persistent obsession.

In spite of all these trials, however, the population never became a prey to dis courage; not for one minute did the people entertain any doubts in the ultimate victory; never was their morale destroyed and at no time could they bring them elv to believe that the genius of France might be conquered.



Let's Talk it Over

That Automobile Trip

IN the March number of CLINICAL MEDICINE, I found a subject fit for kings even ace high: The knowing of our country almost without cost. We live 72 miles from the place where the Rev. Mark Twain located our ancient friends Adam and Eve; or, rather, where Adam was when Eve discovered that strange animal. I mention that historical fact as proof that we live near the center of former outing grounds. I looked up the word "symposium", and, in this respect I would advise securing an early supply.

Four years ago, Eve and I camped in the Adirondacks. The tent was not waterproof, strictly speaking, and the oil stove not just as success, in many ways, but, the trip was. The next year, I said: "Eve, let's go again", and reply came: "I don't care A-dam (n) if I do, but, not with that old tent." The result was a 10 x 14 waterproof tent weighing some 19 pounds. Ridge pole of basswood hinged in center. End sticks of the same wood, with ends bored to receive a wire-spike as pin. Iron stakes, bright red woolen carpet for ground-space to absorb moisture, and at the same time give a bright look. Table constructed of orange box, sides nailed to cross sections of hard wood. The legs were hinged to those pieces with hinges in such a manner that one could pull out the pins and, so, pack better. The aft part of a Ford roadster was then cleared for action and a white woodbox, 20 inches high and full size was bolted securely to the rear part of the car. This box was painted black and resembled an undertaker's cart. A one-burner blue-flame yacht oil-stove was fitted to a box with a door. In this box were packed all the little things used in cooking. A sailor's turkee [What's that?—ED.] contained the bedding while a suit-case held the materials for a dress-up and a shave.

A light ax and a small saw were among the tools put up. One folding cot for each

person will insure perfect rest. We used two blankets and outing sheets. Have plenty of cover. Always have 5 gallons of auto-oil in reserve, as it may be necessary to use more than planned for. One pound of cup grease should be on hand. One gallon of oil will cook two meals and keep fire all night. Don't forget a first-class lantern. Pillows must be had, and can be placed at your backs while on the way. Potatoes, corn, melons, kukes [What is it?—ED.] and so forth are in sacks on fenders, tent-poles on running board. Make a tool-box of wood, for one fender, and in this put a five-pound crock of butter wrapped in wet cotton cloth and this, in turn, in wet woolen. Or, if you can get ice, have a hole bored in one end of the box and put in the ice. This keeps fruit and other eatables fine. You will want 3 to 6 tin pans for dish washing and so forth. Get a folding wash-dish, and a two-gallon tin bucket.

As you advance further in this degree, a ten-cent store will answer all questions or I will assist with a list in full.

When everything is ready, you won't look so fine, but, Lord! how good you will feel. Every one will be interested in your venture.

When about to camp at night, stop early, and get off the state road a good two miles. You will find there no better people, but, the fact is, that the state-road folks have been stolen blind by people that look just like you, and they won't cotton for a cent unless it's on a new road. You will soon learn to send madam to the house and ask for permission to camp, and don't forget to have her say, *we will have no fire!* For some reason, the farmer is afraid of open fires. Madam will also arrange for milk and eggs. When camp is all ship shape, you go after the milk and get acquainted with the farmer. Notice the children (if not girls over 16, and madam looking) invite them to call and bring their chairs

If not, they will pile onto your cots and break them. It is a good plan not to make the beds until wanted. You will be surprised at the number of friends you make. People that you will care for later on, people that are at home on any old subject, and they have "thunks" of their own, at that.

We went through Vermont, New Hampshire, Maine and Massachusetts, even to the spot where the sacred codfish is worshipped. We slept on the roadside and in city parks for 17 nights being out 19 days and at a cost of less than \$50.00, that is, all told. **EVERYTHING.**

We had our pick of all fresh foods from milk fed chicken to lobster (right out of the water), clams, brook trout, and, yes, sir, even a *cold one*, in Maine! What more could a human ask? In the mountains, we would find ourselves 30 miles from a physician—then we would have a clinic, extract teeth, treat children, advise mothers, and so forth. As we took no pay, we soon were loaded with the finest of old home-made wine, fruit, butter, chickens and so forth. At one place, I might have had a hired girl. Great sport, fine country. At one camp, in the northeastern part of New Hampshire, we found fresh bear tracks, in the morning, right by our tent. I was glad, as Eve stopped calling me names for nearly two hours.

If you stop at resorts, though, bring your bonds. But, say! what do you want to do, or see? Do you want to fish or do you want to meet a starched-collar bunch of counter jumpers? If you want to see farming lands, hills, vineyards, beautiful lakes, and so forth, then come to the finger lakes and see it all. If it's wilderness with trout brooks, stumps, brush, forest, (all fine state-roads) not a fence in sight, not a house for 10 miles—if this is what you want, you can find it all in the Adirondacks. I will direct you all I can.

Don't think of sleeping at a hotel even on stormy nights. Do it right for once, and you won't slop over. Practice with the tent at home, so that you and madam can erect it in not over three minutes. Each must be on the job. Commence now to gather your plunder, and then discard all that you can do without. Remember that you can always buy.

Don't set up the tent in a low place or sag in ground nor under large trees for

dead branches to fall on you. Don't be afraid of snakes. There are none that will bother you. Have the stove at back of tent, and sleep with your feet towards it. Keep a flap open at night for fresh air. Don't be afraid. If you can say, "My trust is in God", and your debts are paid up to date, you will be safe. Should a B. P. O. E. come that way, it's a sign of dampness, and madam had better be taken inside and blindfolded.

Keep fire going all night, rain or shine, as in that way all dampness is removed. Remove clothing at night as you would at home. That's the only way to rest. Don't try to make any given point on any one fixed time. Stop in every city and walk for an hour. Keep your camera loaded at all times, also a good gun. Field glasses are a great help. Fish rods are tied to the fender. Have a box of worms with you if it's fishing that you are after. Don't forget the folding chairs. Keep matches in a saline bottle. Your tent lights will serve in the tent, fastened to the center pole. Bore the rear pole full of holes that will take a 10 wire nail. Great place to hang clothes.

When breaking camp, don't leave papers and stuff scattered all over the place. Make a package of them and throw it out at some good place. The light from the stove will be just right to make one content. After you have taken the last nip, and pipe, don't forget to thank God for all these blessings. This is one place where even you can not run stuff into a room in a coal bucket. Any way in which I can further your pleasure will be a pleasure to me. Come this way and I will furnish you good camping grounds.

"NESSMUK"
(A. A. Piatt.)

Wayland, N. Y.

[You're a good scout, Nessmuk. I'm comin' your way when I make that trip. Where do you keep your coal bucket and the fixins'?—Ed.]

EVERYDAY DISEASES OF THE AUTOMOBILE

Diseases of the automobile, like those affecting other creatures, usually show premonitory symptoms and, as in the majority of other instances, these premonitory

symptoms afford a more or less definite indication of what is likely to follow. Unfortunately, they usually are neglected; though, with few exceptions, trouble might be prevented by proper prophylactic measures.

Proper prophylaxis, in general, consists of, first, a supply of gasoline, preferably filtered through chamois in order that its circulation will not be complicated by dirt, water and other extraneous substances. Further, it is absolutely essential that the life-giving spark at high tension and power be communicated to this gasoline at the proper time. This necessitates careful attention to either battery or magneto, connecting wires, which are the nerves of the machine, and spark-plugs. These two constitute the source of power. In addition to this, some temperature-regulating device, or system, to cool the engine, is essential and some method of lubricating for the moving parts. Prophylaxis in this case consists in keeping the cooling system filled with water and lubricating all bearings.

The most common disease of the automobile and one that is usually most aggravating is, balkiness, or failure to start. This failure to start is very readily diagnosed even by the novice. If a mechanical starter is provided, it very frequently is repeatedly called into play until not only does the car fail to start but the mechanical starter fails to work, owing to the battery having been exhausted.

In the car that does not boast of a mechanical starter but must be wound by hand, if the first three or four windings do not produce results, it is advisable before further treatment to attempt to determine, if possible, wherein the trouble lies, because, if the car will not start on two or three turns of the crankshaft, it is not likely to start on two or three hundred turns, and two or three hundred turns have been known to produce unlimited profanity, total loss of peace of mind and, often, of several pounds of flesh.

Ordinarily, we follow a definite line of procedure in diagnosing a case and it is advisable, unless some particular symptom points to a definite system as being at fault, to begin with the fuel system. Is there a supply of gasoline? Does the gasoline reach the carbureter? That necessitates that the gasoline line shall not be plugged but that there be a free flow of gas-

oline from the tank to the carbureter. If a vacuum tank is a portion of this system, the most frequent trouble will be found to be, that the air vent in the vacuum tank does not open. Prime the carbureter. The gasoline should be seen to flow from it. If not, the vacuum tank, pipes, and so on should be examined to determine where the trouble lies. There may be dirt in the needle valve of the carbureter. You may have a very poor gasoline that will not ignite, particularly in cold weather. Or, there may be water in the gasoline that is frozen in one of the pipes. Do not forget that it takes a rich mixture to start on, but, also, that it is possible to flood the cylinders. This will moisten the spark plugs, it will be impossible to start and the spark plugs will become fouled.

It always is advisable, therefore, to examine the spark plugs after one has tried to start and failed. Next, the battery should be tested. Usually, this can be accomplished by trying to start. If there is sufficient power to turn the starter over, there is ample power to produce the proper spark. If there is no starter, the lights may be tried or a spark plug may be removed, laid upon the cylinder and, while the engine is turned over, careful note made as to whether a strong spark occurs between the points. Do not forget that the spark may occur between the points when the plug is out of the cylinder, yet will not occur under compression in the cylinder. Further, it is essential that the spark-plug porcelain be perfect, because, if the porcelain is cracked, the spark will jump outside of the cylinder instead of inside. If they are foul, the spark-plugs must be cleaned, since it is impossible that they work properly if they are gummed or oily. If, upon removing a spark-plug, it is found to be oily, it may be due to one of the following diseases: First, valves need grinding, particularly the exhaust valve. This allows the entrance of the exhaust gases, diluting the mixture with products of combustion and preventing fire; or, there may be a broken or leaky piston ring allowing oil to work its way into the cylinder. Do not forget that cold water on a hot spark-plug will crack the porcelain insulation. Further, there may be a leak in the intake or around a worn valve-guide, or the valve may stick in the guide, preventing the valve closing properly; or the cylinder may be cracked; or an excessive amount of

lubricating oil may cause a fouling of the spark-plug with oil and, consequently, it will not fire.

Everyone is familiar with the method of testing, or determining which cylinder is firing, by short-circuiting the plug to the engine by means of the screwdriver, to see whether or not short-circuiting of this certain plug causes any change in the rate at which the engine running. If no change is produced on short-circuiting a plug, it is evident that that plug is not firing. The most frequent causes of failure to start, therefore, are lack of gasoline or too much gasoline, the cylinders being flooded, or lack of spark due to failure of the battery, broken or short-circuiting wires; occasionally, improper working of the magneto; dirty, foul spark-plugs, improper closing of the valves, a leak somewhere in the cylinder, resulting in loss of compression. This last usually can be determined by removing all the spark-plugs save, say, from one cylinder and by cranking the engine, noting whether or not there is resistance produced by compression in that cylinder, the others being open. By transferring this spark-plug to successive cylinders, the affected cylinder usually can be located.

Another somewhat infrequent but nevertheless equally aggravating disease is, that the car stops. If the car stops rather suddenly, it probably is the ignition system that is at fault. There is a short-circuit or a loose wire. The battery is exhausted or the plugs are foul. If the car stops rather slowly, gradually dying down, there either is no gasoline or the supply system is clogged at some point. If the car starts but misses, the engine is cold or certain plugs do not fire or there is a leak in some cylinder. If the car starts but misses, with a sneezing in the carburetor, the mixture is too lean. If black smoke is emitted from the muffler, the mixture is too rich. It also is possible that missing may be due to broken or dirty spark-plugs, or that the gap between the points is too wide. The wiring may be defective. The mixture is too lean. At low speed, the mixture must be richer than at high speed. A leak in the intake, or a weak exhaust spring and sticking exhaust valve, or an exhaust valve fouled with carbon will produce a lean mixture, resulting in miss-firing. The engine starts but has no power. This is due to poor compression. There either is a

crack in the cylinder or the valves need grinding, or the rings are defective, that is, the rings leak, or there is too rich a mixture. Occasionally, lack of lubrication is the cause or the brakes may be dragging. If the brakes, particularly the emergency brakes, are set, attempts to start usually will kill the engine.

A flat tire also will produce evidences of lack of engine power. When the car is running, one often is annoyed by knocks. In a new car, the common cause usually is too rich a mixture, or over-loading on a hill; this may be remedied by going into second speed from third. Or the spark is advanced too much; or the cylinders are filled with carbon, causing preignition; or the bearings are worn. Worn bearings usually knock in a more audible manner at high speed, say, thirty miles an hour.

The ordinary noises about a car, running the gauntlet of the entire menagerie from the squeak of a canary bird to the braying of a jackass, usually are the result of loose fenders, hoods, or want of lubrication in the springs.

There are many minor diseases of the car that really are grave annoyances to the driver but do not stop the engine, most of which, however, are readily detected by one who has driven for some time and usually are neglected until they lead to complications and which, then, of course, require serious consideration. Nothing has been said of tires which produce more cases of heart failure among autoists (particularly that type of disease known as blow-out) than any other single condition.

The diagnosis in most instances of these minor ailments can be made from the driver's seat by the feel and sound of the machine. When he knows his car, he usually can diagnose them, at least locate the probable source of the trouble much more readily than can a so-called expert who sees the car run for the first time. While there are many complicating problems concerning the mechanical engineering side of an internal combustion engine and the transmitting power in the up-to-date automobile, the principle, nevertheless, is comparatively simple and it is essential to success, in the diagnosis of a disease of this vehicle, to proceed systematically. Do not monkey with the carburetor and then look at one spark plug, and then try to start. Proceed systematically from the gasoline supply tank to the

cylinder, carefully testing all the parts of the gasoline supply system, including the vacuum tank, carbureter, intake and manifold, and so on. Then, proceed in the same, thorough, painstaking manner with an inspection of the individual spark-plug. Ordinarily, one believes that this consumes considerable time, but, the probabilities of its saving time are much greater than a haphazard wriggling of this wire, tightening this nut, examining something else, then going back to the spark plug, particularly when one has an audience, as is usually the case. Everyone of the onlookers knows absolutely nothing about an automobile, your particular make of car especially, yet, they persist in an all-wise manner, all and everyone of them, to make a different diagnosis when, in all probability, your own guess would be a thousand miles nearer the truth.

J. F. BIEHN.

Chicago, Ill.

LAY ON "LIZZIE"

"Lizzie" is temperamental, "Lizzie" is subject to fits;
Sometimes she'll wheel like a sinuous eel and sometimes she'll shake you to bits.
Sometimes she sounds like a zephyr, more often she grates on your ear.
Still, she's a wonderful thing when you get her to sing and hit the long road on high gear!

Don't think that all "Lizzies" are flutters—
some cost oodles of cash—
But, the "innards" of all—great, medium or small—have a habit of going to smash.
Fordinas may cause you annoyance, back-fire or boil like the deuce,
But, the two-thousand boat can "act up" like a goat and refuse to respond to its juice!

The "four" may develop an asthma half-way up a straight-away hill
And insist upon rearward progression, with, perhaps, at the bottom, a spill;
But, the "twelve", "eight" or "six", in a similar fix, will act in precisely this manner,
And cause you to swear, as you pay for repair, that you'll "sever connections with Hanner!"

But, then she'll behave! She "hits" forty; in traffic controls like a bird,
No more you upbraid her, and, surely, to trade her—or sell her—would be most absurd.
So, you promptly get busy and brag about "Lizzie," "No bus in the town has more class",
But, while friends admire, she blows a rear tire and piles herself up on the grass!

Again you announce that you'll give her the bounce; but, to "shake" her, she'll have to be fixed.

So, the repair-man gets her and tenderly pets her, until his account becomes mixed: Her valves needed seating, she showed overheating, her bearings were burnt through and through; Her pistons were wracked and one cylinder cracked and her steering-gear twisted askew!

Gaskets, packings, and rings, with a few other things, all seem to have gone in that car. The bill is a fright, but, you pay it all right. You're "done", and you know that you are.

So, you advertise duly and state very truly, you've got "a most wonderful boat", And someone else gets it and very soon bets it's a son of a son of a goat.

L'Envoi

"Lizzie" is temperamental, "Lizzie" is subject to fits;
Sometimes she'll wheel like a sinuous eel and sometimes she'll shake you to bits.
Sometimes she sounds like a zephyr, more often she grates on your ear.
Still, she's a wonderful thing when you get her to sing and hit the long road on high gear!

GEO. H. CANDLER.

Chicago, Ill.

CAMPING IN THE AUTOMOBILE

I have my automobile all fixed so that I can sleep in it on cots that go on the backs of the seats, and I also have a shed roof tent with a large flap that goes completely over the machine and ties down to the wheels on the opposite side. I also carry a folding gasoline stove so that I do not have to bother to hunt up wood. One of the great advantages of sleeping in the automobile, as I do, is, that on particularly cold nights I can just set a kerosene lantern in the machine under the bed and, no matter how cold it is, I can sleep very comfortably. Most of the cots and beds that go on the side of the automobile are the coldest things that could be imagined to sleep on, and it is very difficult to heat them with a lantern as I do mine. Another thing, by being in the machine I am high and dry no matter what the weather is, and there are no bugs or snakes crawling into the machine. I spent three weeks, last summer, camping and fishing all around through northern Michigan.

I have not been able to induce my family to go on a camping trip with me, so, I

have taken a nephew who is an enthusiastic fisherman like myself.

I have had a great deal of experience in trout and bass fishing and in the use of the automobile for outings. If there is anything that I can help you on, in this line, I shall be only too glad to do it.

WILLARD M. BURLESON,
Grand Rapids, Mich.

TAKE A TRIP TO IDAHO

Don't you need a representative in the great Northwest? Never before, to my knowledge, has a proposition of this kind been offered the medical profession. I want to be your back-to-nature representative. I have Lake Pend de'Oreille, the grandest body of fresh water on earth, bar none—40 miles of shore line, 2,000 feet above sea level, right in the heart of Idaho's ever-green mountains. The greatest trolling grounds in the world for cutthroat and Dolly Varden trout; innumerable trout-streams of clear, cold, mountain-water, thronged with the most vivacious trout that you ever tried to lure, and so plentiful that we often fill our creels in two hours' fishing. Partridge, grouse, and waterfowl of every kind and big and small game abound.

This is the last stand of the things of the wild against the advance of civilization, and so well are they protected, by nature and the isolated location, that the natural increase of these creatures far exceeds the sportsman's annual kill.

To your rundown business man, *idleness is not rest*. He needs to soak his soul, over hub and spoke, in the joys of God's great out-of-doors. Send me his name, address and also the name by which his close friends know him (Bill, Joe, Dick, or other friendly appellation).

I shall interest him in this wonderland, through my postal-card views, and you will get much amusement out of this mail-campaign. When he decides to come, I will familiarize him with the necessary equipment, meet him at the train, take him on a tour of the lake, locate him on a camping-site of his own choosing, outline his itinerary according to his physical condition, furnish him an attendant, companion, cook or guide, to hunt, fish or hike with him until he is back to health.

As your representative, I shall be glad to plan for you and yours a vacation in

this sportman's paradise, so that you may have that one bangup good time in all your toilworn existence; and I trust that I may have the pleasure of meeting you chasing around the lake with you in my power-boat, and entertaining you in a manner befitting your station in life.

Send me the names of those needing and able to take this nature-cure, and watch results.

FLOYD G. WENDLE,

Sandpoint, Idaho.

[I know Wendle. He was introduced to me by my friend Dr. Charles S. Moody, who, by the way, is the most versatile genius it is my pleasure to know. Wendle and Moody belong to the same class, and they are both as fine fellows as you could find anywhere in the world. Also they both know the great big out-of-doors as few men know it. I can heartily recommend Doctor Wendle's nature-cure stunt to any doctor who may want to take the treatment for himself or prescribe it for one of his patients. Whoever puts himself in Wendel's care for a trip through the Idaho mountains is going to have the time of his life. I back this with my personal guarantee.—Ed.]

CONVERTING AN AUTOMOBILE INTO A SUMMER HOME AND A PULLMAN SLEEPER

It is generally conceded that every busy man, woman, and overworked youth should be in the open as much as possible, to enjoy the fresh air, especially during the summer months. This can best be done by daily excursions to the parks or weekend trips into the country.

To most professional and business men, the automobile has become a necessity; then, why not, with a small initial cost, fit out your car so that you can enjoy these outings the more? If only we knew how, most of us could have this delectable experience. By this, I mean, health-giving and life-prolonging enjoyment. In other words, the pleasures of a millionaire on the salary of an artisan.

Many complex and expensive devices for automobiles have been constructed, with the object of adding to the comfort of the auto-tourist, such as trailers fastened to the back of the car, to carry the supplies, (e. g. tents, bed-springs, mattresses,

cots, sleeping-bags, hammocks, cooking-utensils, food supplies, besides quilts, sheets and blankets). Most of the things just named are unnecessary, never used on the trip, and are but in the way. Many an automobile got stuck in the mud, to be pulled out at \$5.00 per, just because of the trailer and the overloading with a lot of this useless scrap.

On the other hand, those of us who have had to sleep on the ground, many a



Dr. T. A. Grigg.

time caught in the rain, or in a hammock or sleeping-bag, know the discomforts thereof, and, so hesitate to repeat these experiences. Besides, a trailer is hard on the car, it impedes speed even on a good road, while in mud it stalls you completely.

The experienced motorist is learning his lesson or already has learned it from disagreeable experiences. He now equips himself with the most compact outfit, consistent with lightness and efficiency, that will insure comfort and service to the party. For the culinary department, there are many cheap and compact kits, that give good service, to select from. Never over-

stock with food, even for cross-country journeys; you always can buy more. In this way, the food can be kept fresh and palatable, instead of becoming stale and much of it being left behind for the birds and gophers.

On preparing for an outing, the question of selecting sleeping- and cooking-outfits comes up. After filling the car up with a mattress, one or two old rugs and an old piece of carpet, blankets, sheets, pillows, a tent, and a few boxes of selected groceries with the cooking-utensils, the car is too full to accommodate the wife and family or possibly invited guests. After relieving yourself of all the "French" at your command, together with a lot of misplaced English, the coat flies in the air and catches on a rail and, all the parapher-



This illustration shows the Auto Sleeper adjusted in the car. Note the block and tackle method used to render the sleeping-service taut and even. The framework is made of seamless steel tubing, heavily coppered and nickel-plated, and the stretcher of 16-ounce double-filled army duck.

nalia are dumped upon the dusty ground or, maybe, in the mud. The clothes-line is cut down and everything is tied on the back of the car. You are now ready for the start, after wasting another half-hour washing up and changing clothes, even to the sweat-soaked underwear.

Everything goes fine, until the destination is reached, when you find that you overlooked putting a diamond-hitch around the bundles and that most of the much-needed supplies have been lost on the way, or you have run into an unexpected rain-storm and you have a wet bed to sleep on. These are only a few of the unexpected pleasantries that most of us have been up against.

To avoid most of these unpleasant and at times costly experiences, let me tell you what to do. For a party of three—hus-

band, wife, and child—purchase a "Bradley Auto Sleeper", which is a folding berth for an automobile. These are made to fit any car, from the Ford up. The Auto Sleeper is made so perfect that, when set up in the car, it will not mar the paint or upholstering of the finest car. You will find this bed more comfortable to sleep on than a bed in a Pullman car or a hotel. (Fig. I.)

This auto-bed can be set up ready for occupancy in from five to seven minutes. In fact, I have set my auto-sleeper up in three minutes and it can be taken down in the same time, packed ready for traveling. The total weight of this auto-bed is 35



Bed in use.—An idea can be gained from this picture of the results accomplished by the Bradley Auto Sleeper. Notice that the person in bed does not sink into the center of the stretcher. The bed is easily adjusted and remains so and can not sag or bag, but, is as comfortable as the bed in your own home.

pounds. It can be carried on the running-board of the car, as shown in the illustration, or on the trunk-rack, or, if you so choose, use it for a footstool, by placing it on the floor of the car, in front of the back seat. The covering in which it is contained is waterproof and will keep it free from dirt and moisture.

Illustration No. 2 shows you what solid comfort really is. Here you see the auto-sleeper made up and occupied. This canvas stretcher makes a most admirable mattress, with an auto-robe spread over it, upon which are spread the sheets, covered by the blankets, all of which can be folded and placed under the cushion of the back seat, out of the way, until again needed.

No part of the stretcher or sleeping-surface touches the seats of the car. Here you have a perfect sleeping-compartment, where you are protected from the worst inclement weather.

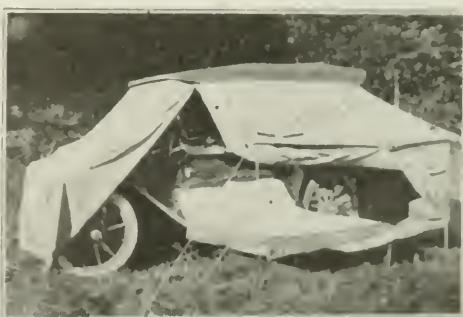
Should your party consist of four or you can add to the foregoing equipment

Bradley's Auto Sleeper No. 2, which is built along the same lines as sleeper No. 1. It is made to fasten onto the side of the running-board of the car, with thumb-screws, and extends out on the side. The middle and the outer end of the bed are supported on extension-legs, as shown in Fig. 3.

To accommodate six persons, two of the No. 2 Auto Sleeper beds should be carried in conjunction with Auto Sleeper bed No. 1. Thus equipped, there will be no crowding, and the whole affair is easy to set up. As you will see by this last illustration, a tent is designed to be used with the No. 2 bed. These tents are so constructed that they can be buttoned to the car where the side curtains go, thus doing away with tent poles and making the top of the hood the roof of the tent, as shown in the illustration. These auto-tents are constructed with different grades of canvas, either zephyr-cloth or balloon-silk.

You will find that, for touring-, fishing-, and hunting-trips or for week-end vacations, this equipment has no equal, in fact, it is in a class all by itself.

For the convalescent, the invalid, and the consumptive, it will ensure renewed life and health. With it, you can be free from all the handicaps and hardships of



Outdoor Sleeper.—The illustration demonstrates the Bradley Auto Sleeper No. 2 ready for occupancy. The tent over the car is let down, which serves to make the compartment private and makes it storm-proof. The bed is constructed similar to Bed No. 1, finished thoroughly throughout.

camping out. You are not limited to one beauty spot or nook in the woods. With an auto-sleeper in your car, you are always assured of the finest accommodations in the most remote places. Also, it means that you can be free from the expense and crowds of summer-hotels. So, why not enjoy the region in which you live. You have it in your power to make a pleasure-

park of all the country within a radius of seventy miles of your home.

Think of the pleasures of sleeping in the cool woods or by a mountain stream. Get one of these outfits and enjoy life.

T. A. GRIGG.

Butte, Mont.

PRACTICAL ADVICE FOR THE NOVICE TRIPSTER

I have not had the greatest of experience in automobile-vacation-outing, still, from what I have had, I must say that no physician, whether in city or in country practice, can spend his vacation more profitably and pleasantly than to get into his car early some June morning and go whirling by some beautiful farm land or crossing the green meadows, just as the sun begins to peep above the eastern horizon.

When your car has been inspected, greased, and oiled properly, and you and your family are comfortably seated therein, say to your driver, if he be a hired one, else to yourself, Now, we have no special point, town or city that we are compelled to make today, therefore, do not go in a break-neck speed, but, drive leisurely along, stop at various places that interest you, and take lunch down by the old mill-creek and watch the little fishes as they disport themselves in the sparkling water as it rushes onward toward the sea. But, to be able to reap all these innocent pleasures to their fullest extent, absolutely leave behind you all business. So, do not be thinking of old man Harriman getting one of his serious heart-attacks and that he has such profound confidence in you that he would not want to call any other doctor; nor of the operation that Mr. Whatshisname Gotrocks spoke about your performing in a few days; neither worry about those four or five labor-cases about which you had been consulted and that were to come off in the month of your anticipated vacation. Just drop the good dames a card or call on them and advise them of the fact that it is absolutely necessary for your health to take a vacation, but, that you have invited Doctor Allright to assume charge of your work for such time as you are away, and assure them that he will attend to them properly.

And, before leaving, get your garage-man to free your engine of all carbon, and

to make any necessary repairs. In fact, have the entire car in perfect apple-pie order. Get a new set of tires all the way around, also one or two extra casings and several extra tubes. Also, provide two extra spark-plugs and a box of the best assorted patches obtainable. However, these won't always give the best results, therefore, I would advise you to take along a small gasoline-vulcanizer with which you can do a first-class vulcanizing job, in fifteen or twenty minutes, one that is sure to hold.

If you have extra tubes and casings, and one inflated on the rim all the time, then, when you get a puncture (you will not be likely to have a blowout, with all new casing and tubes), you can, in a very few minutes, drive to the shade of an old oak-tree (if you don't happen to be



Doctor Barron in Mighty Attractive Company.

in the prairie) and exchange tire or rim or wheel, as the case may be. Then, at noon or around the campfire, you can leisurely repair and inflate another and be ready for the next puncture, or, if you don't wish to do this and it is convenient, drive into a garage and have the garage-man to vulcanize, inflate and place in readiness on your car. Of course, the latter course will add to your comfort when it is convenient for you to do so.

Now, on this trip, do not be afraid to soil your hands. You are supposed to have on a brandnew suit of overalls, to be more comfortable, and you can soon clean up your hands again after your return home. You will have to "ruff and tuff" it, get up a good perspiration and be real tired at night, in order to gain a pound of flesh a day, and not dream bad dreams at night. It doesn't matter; if you are a country doctor, it will remind you of your boyhood

days, while, if a city physician, you will be learning something new.

Also, carry along some extra ball-cups and cones. It may save you having to walk five or six miles into town to get some and maybe then have to 'phone to some place else and thus be delayed possibly a whole half day or more in some lonely spot where there are no beautiful shade-trees or flowing brooks. And, remember, "the longest way 'round is the sweetest way home", if you are on gravel roads. But, as yet all our good road-systems have not been connected up. You will have to travel on a great deal of road that is not graveled; so, in case you are going through some swamp and you see a pond of water ahead and no way going around it, and you know not just how boggie and sticky the bottom is, step out at once and put on your chains. Do not wait until you get in and your wheels begin to spin, and then say, "Piffle, I wish I had put my chains on, now someone has to get out into the mud and jack up a wheel and put the chain on." Just remember that you are not in a hurry and, even if you were, you still save time by heeding my advice.

So much for the car. Now for a few things about your personal equipment. I would suggest that you take along with you a small tent that you can attach to the side of your car, some blankets and pillows, a coffee-pot, frying-pan, knives, forks, spoons and a few other eating-utensils, and, possibly a very small gasoline-stove. Have along some sugar, coffee, bread, a ham and some eggs, while a little bottled beer used to be not so bad. But, now—alas!

When you get hungry, it will be only a thirty-minute job, and you have a square meal ready. Yes, just sit right down on the ground and get outside of it, then prop your head up against a tree and rest for the next thirty minutes. This may not appeal to your city doctor. Still, just try it, you may like it. But, if you do not, you will enjoy the hotel-fare the better when you do get to a caravansary. Don't be afraid you won't digest such eatables. You can digest a rock after a few-days' travel. It is the change from your everyday life that will do you good. I once took a trip like this and gained 10 pounds in fifteen days.

I especially invite your medical friends in the north to come down south nearer

the coast and sleep in the open. It will do them good. I don't mean for you to be absolutely your own servant, but partly so. On some nights, it may be convenient to stop in town at a hotel, but, as you pass through the towns, buy some fruit, fresh and canned, also the others things that I have mentioned; and, then, when you come to some beautiful spot that impresses you and it is about mealtime, get out and prepare a meal. The admiration of the scenery will assist greatly in digesting your meal. The first three or four days, you may feel at night as though you had been plowing up a "new ground," but, that, too, will do you good; while, after having spent three or four weeks on a journey like this and come back home, you will feel so fine and act so cheerful that all your patients and friends will like to see you as they never did before. It will wear off that grouchiness that you accumulated from that year of hard work, or possibly, two or three years, as is the case with me at present. But, I am going to take just such a vacation soon, myself. I now will leave the discussion of the automobile from a business-standpoint to someone else until I return from my trip. We could not very well get along without these discussions. So, here's hoping for you all *A MERRY JUNE-VACATION!*

OLIVER B. BARRON.

Osyka, Miss.

FOR A VACATION TRIP TO MICHIGAN

What is your idea of a real summer vacation? Is it to put on your summer finery, get into your 8-cylinder Weasel, drive over stone or gravel roads to a cottage by the lakeside or seaside, where the rent is \$400 a month and your wife or daughter can vie with the dames of society, and in the end go home, with genuine disgust emanating from your being? If that is the way you look at it, I can not help you. But, if you will take off that stiff collar, put on some old clothes or a suit of khaki, anoint your face with some "lick dob" to keep the "skeeters" away, I will tell you where you can have some genuine fun, and it will not cost you a fortune, either.

Then, there is that 8-cylinder Weasel, which rolls so noiselessly over the pavement. You get out and proudly survey it

as it stands by the curb, lingering with fond admiration on its graceful streamline body and wire wheels. Mr. Editor, did you ever have that car out where you could give it a thorough test and tryout? Perhaps, if you did, you have had the unheard-of pleasure of having one of those "tin lizzies" put-put-put right by that graceful



Large Lake—The Home of the Big Ones.

streamline body and wire wheels, in the sand or mud. Don't go to the club and brag about how much power it has, before you have given it a thorough tryout this summer.

I do not own a hotel, neither do I furnish guides; however, there are twelve or fourteen lakes (regular lakes) near Prescott, Michigan, and all of them have fish in them—real live fish. You do not have to know how to cast a line 150 feet, for, these Prescott fish are foolish enough to bite a hook even though it smells of powder and cosmetics. You must know, when I tell you that I, myself, an amateur, and another one as green as myself, caught 22 pike, a fine dogfish, 5 blue-gills, and 2 speckled bass in four hours, that there is fun ahead.

"Sh-h-h-h, keep still". Look at the picture. There I am, not as much of a liar as you thought, am I? But, that is not all, for, my album is full of pictures taken from life.

How about it, Mr. Editor? Are you tired of the city and want to get out where you can breathe God's pure air and know that it has not been exhaled by a thousand human beings before you? Do you want to get as close to nature as possible? If you do, get that little Henry out, have it overhauled, load it to the gunwales with tent, cooking-utensils, and the rest of things, and strike out for the wilds of Alcona County of Michigan. Don't be afraid to overload the machine, for, your

Henry will take you there and bring you back again.

When you get to Alcona County, look around and find the Wolf River or the Magin Creek, get out that line and pole, chase around and capture a grasshopper, attach it to the hook, drop the contraption in the water, and, in a minute, you will have the piscatorial sensation of your life.

You have dined in the finest hotels in the cities, have eaten oysters on the half-shell, have smacked your lips over a steak "rare"-done, but, say, did you ever catch a speckled trout from a cold, clear stream, scrape its hide a little, cut off its head, take out its insides and fry that trout in butter? You did not? M-m-m-m-m! Then you have missed a dish that has got the best banquet beat a thousand ways. But, say, the cook accidentally got a little dirt into the frying-pan. Don't worry, that dirt will make it taste all the better.

By the way, do not forget the grub. When you think that you have enough, add at least a third more, for, you are going to have a regular humdinger appetite. I know by experience, for, I took



A Four-Hour's Catch.

two of the sickliest-looking fellows from the city up with me one summer, and we figured that their appetites would be the same as in the city. But, your Uncle Dudley had to get out and forage in the neighborhood, else we should have starved.

And, don't forget your camera. Photographs taken while on a trip will be worth thousands to you when you look at them a few years hence. I have an album that money can not buy.

But, you are getting tired of this ranting. If you want some good lake-fishing, write Richard Weishuhn, Prescott, Michigan. He will tell all about hotels, cottages or tents, and, by the way, will show you a

good time. Do not forget a stamp for an answer.

Say! You nearly forgot the missus—the good lady needs a vacation as badly as you, yourself, do.

A tired-looking woman from the city came to see us two years ago. She had lived there from birth up and now the cares of motherhood had placed furrows in her brow and, yet, she was young. We suggested taking a little fishing-trip, but, that did not appeal to her, although she would go along and sit in the boat and look on. I put her in the back end of the boat and placed a trolling-line in her hand. After traveling some distance, a speckled bass grabbed the hook and started toward the bottom of the lake. Let me tell you right here that tired look in the woman's eyes disappeared in a jiffy, and, when it came time for her to go home, it was hard for her husband to persuade her that her duty was in the city.

Will you allow me to make a suggestion? Have your auto in good running order before attempting a trip. There is nothing that will spoil a trip more than a bucking machine. If you have a tire that is suspicious, take it off and leave it at home. You can wear it out when you get back. However, do not start out with a machine that has been newly overhauled. Run it at least one hundred miles before beginning a trip.

Another thing, if you are accustomed to driving only from your home to the office, the first day's drive will make you pretty lame through the shoulders. Take a few fifty or seventy-five-mile trips; then you will be more used to driving.

I do hope that this will be of some benefit to you or some of the folks.

M. E. BOVÉE.

Maple Ridge, Mich.

BE TIDY WITH YOUR TOOLS

Because of an unusual series of cases following the vacation period of last year, I wish to proffer a word of caution to those contemplating "That Automobile Trip", by relating the important points in that experience.

Within a period of forty days, I removed the coccyx or its remnants from each of three men who were injured in a similar manner, while touring, and making such adjustments and repairs to their ma-

chines as were needed from time to time, during these trips.

In one instance, after making some adjustment, a wrench was laid in at the side of the driver; in another, the crank was laid in the seat; in the third, a bolt with nut attached was carelessly thrown into the rear seat, instead of these articles having been placed in their proper places.

Later on, while driving across rough places, unexpected jolts lifted the passengers from their seats and at the same time moved the solid objects into such positions that on the return from the bound, direct contact with the end of the spinal column resulted in fracture of the coccyx.

In each instance contusion was sufficient to cause breakdown of the tissues; infection and necrosis followed and surgical measures became necessary. We may conjecture reasons why these injuries received no adequate attention until suffering compelled the victims to abandon their trips and seek relief.

Whether physicians would be guilty of such little acts of carelessness and such marked self-neglect in case of injury while on an outing, in the company of few or many, I am unable to say.

W. F. SCHRADER.

Fort Wayne, Ind.

IN FAVOR OF CARS OF SIMPLE CONSTRUCTION

I purchased my first automobile in 1910. It cost \$2,100, and it weighed about 3,000 pounds. I used it exclusively on bad roads in country practice, and sold it, in 1917, for \$175. Its upkeep was very high and depreciation very great.

In 1913, I bought a light car for \$500, used it for three months and sold it for \$375. After selling it, I learned that the trouble that I had experienced was caused by poor lubricating oil.

In 1914, I bought a roadster, that weighed about 2,200 pounds, for \$925, used it over bad roads for three years, then sold it for \$200. The upkeep was very high, because of its complicated machinery.

In 1916, I bought a light car weighing 1,600 pounds. This has given splendid service, with low upkeep and but little depreciation in value.

I have learned that, the less complicated the machine, the more simple its op-

struction and as light as is consistent with proper strength, the lower the upkeep-expense, if the car is used on country roads.

Since trying a light car, in 1914, I have always kept two machines and find that it is economy, as well as assuring one's being prepared, to lay up a machine for repairs when needed.

O. V. JAMES.

Frankford, Del.

THIS WAS A GRAND VACATION-TRIP

At your request, I will give you and the readers of the journal my experience in getting pleasure out of an automobile-trip.

First, about the equipment. I had a 1917 5-passenger Metz touring-car. My extra equipment (and, if you ever start on a trip, you had better have it with you), consisted of 3 different-sized monkey-wrenches, 2 hammers, 6 wrenches, 2 oil-cans, 2 pairs of pliers, 1 heavy pocket-knife, $\frac{1}{2}$ pound nails of assorted sizes, 1 small wood-ax, 1 short-handled shovel, 1 handsaw, 1 brace and 2 bits ($\frac{1}{2}$ and $\frac{3}{4}$), 1 chisel, 2 pieces of spring, 2 large rolls of tape, 2 cans of inner-tube patches, 2 rolls of clingtite rubber for patches, 1 large sheet of sandpaper, 2 extra inner tubes, 5 blowout patches, 2 rolls of adhesive tape, 2 boxes of inner-tube valves, 2 pieces of wire 8 feet long, 2 extra cans of patch-glue, 100 feet of large fish-cord, 2 extra tires, one jack, 1 pump, 1 gallon of oil, 5 pounds of cup-grease, 2 extra spark-plugs, and 1 extra front and back spring. Also, on the journey, we had the following for our equipment: 1 collapsible stove and joint of pipe, 2 collapsible camp-chairs, 2 2-gallon water-canteens, and 1 2-gallon water-bag, 2 frying-pans, 2 small stew-kettles, 1 goodsized coffee-pot, 1 washpan, 2 collapsible cots, one double and one single, 1 9 by 12 tent and collapsible tent-poles, 1 small feather-bed, 4 blankets, 4 quilts, 3 pillows, 1 large and one small tarpaulin, or sheets, 1 "grub"-box well filled, 1 steel fishing-rod and equipment, 1 automatic savage and sheets, 1 12-gauge shotgun and ammunition, 1 emergency-case well stocked, and, not to forget one "alkaloidal case" No. 7, well filled.

With this equipment, both for pleasure and for mending, my wife, my 9-year-old girl and I started out from Fallon, Nevada

on the 16th day of October last, by way of the Golden Gate, down along the Pacific to Mexico, then back through southern California, Arizona, New Mexico, and into Texas, through the beautiful mistress of the southwest, El Paso. Then over the beautiful plains and prairies up through the now famous oil-field to the state of our destination, Oklahoma. We called a halt at Oklahoma City, on the 20th day of November, having driven twenty-seven hundred and ninety (2,790) miles and spent only seven nights of that time inside a house, and never having my car inside a shop for repairs, and never having stopped over three hours to make my own repairs. I did get lost one time between Tucson and Tombstone, Arizona, and drove over those wild dusty plains until I was out of gasoline, then had to walk five miles into Tombstone for help. This was the only time that we ever missed our route or were out of fuel or water.

And now, my friends of dark nights, long hours, and pinched lives, if you have never been on a trip of such kind with your family, let me say to you that you will never know what life and pleasure is until you lose all sense of fear that you will never grow rich, and undertake such a hike as this one, or, what would be better, a longer one. I say, lose all sense of fear, and I mean just that, too. When your car and yourself are equipped as I was, then it is that you can, or should, be sure that you can neither starve nor fail to get somewhere. And you need not think, that, in order for you to take a trip, you will have to go to Europe or South America or Asia or Africa or any other "doggon" old place—take it right at home.

If you are like myself, all the geography that you know is just what you have been able to drive old "Beck and Polly" over while you relieved the one sufferin' the most, or got from what time you could steal to read about what some other fellow had seen or found. But, let me say to you frankly, that you will never regret it, if you will trim the old car up, even if it is only a "Henry," turn her nose toward the setting sun and keep her going, if you live in the east or middle states. If you live in the western or mountain states, I don't know whether to tell you to go east or not, for, I have never been there yet.

The route over which I went was through that beautiful Laramie Valley

along the old '49-trail, where our Uncle Samuel is practicing a little cooperation with the farmers against the droughts of the West, by literally daming up the waters of a large river and using those waters, as man needs them, to grow food for himself and to beautify that once wild and parched sand desert. Over that oft-beaten trail and up we climbed, through that once thriving city, now the state capital, Carson City, Nevada, until we were on the banks of that magnificently blue and beautiful Lake Tahoe.

Here it is that the gods of the mountains must have chosen to build a permanent place where they could ever allay their thirst and cool themselves after a few-hours' work at creating some extra-sublime and sacred spot at which man might gaze or through whose roaring forest he might leisurely roam. And man has not been slow; for, all about this enchanted place, you can see evidences of man's magic touch, in the splendid homes and pleasure-places that he has constructed. From here, our way carried us up and on. Up we went, until at last that faithful old Metz landed us safely on top of the great divide. Here one instinctively feels, after looking back to whence he started only a short time ago, feels that he has, indeed, climbed to the very top of the world; but, alas you only have begun to climb; for, here you look away on either side to snowcapped peaks, towering, it seems, to the very gates of heaven. And here, as you stand gazing, in wonder, at this magnificent display of beauty and power, you have but to turn your eyes down into the blue haze below, and there you can, faintly, see the dim trail of the weary 'forty-niner, as it zigzags in and out on its way across to that haven of wealth and splendor just beyond.

From here, we took a downward climb, and down, down we went among the roaring pines and stately oaks, till at last we came out into that narrow, historic little valley that contained the quest of all the early fortune-hunters, Placerville, California—a small Garden of Eden on the mountainside.

But, here I go telling you of the beauties and what I saw on my trip, when I only was asked for an experience with an automobile-outing. However, I am sure that you will look over my wanderings, for, this is my first trip of the kind, and, like

the little country boy who was to see his first show, I had 'ter tell about'n it. And, yet, I have merely just begun to tell of the wonderful beauties that you may see and of the pleasure that may be yours on a trip of six-weeks' or two-months' auto-drive such as I had. And, here is something else, if any "Knight" prowlers are "knocking" hard-surfaced roads, anywhere in these United States, take my advice and go to California or some other place where they have that kind of roads, and take a few-days' spin. Then you will stop knocking and go to boosting hard-surfaced roads everywhere.

Now, as to the care of your automobile: I went over my machine once and twice every day. I would don my overalls and, with my wrenches, oil-cans, and grease-cup, look things over; and, when needed, would tighten and oil every part, besides keeping all bolts, nuts, and screws securely tightened. By doing this yourself, you will be saved many an hour's worry and delay.

I have been a continuous reader of *The Clinic* and have enjoyed the many helpful, hopeful, and boosting articles I have found there, all my medical life, which is since 1902, and I have often thought, during the many discussions of the "flu"-causes, that I should like to get in and suggest that, possibly, if we only would reflect that, as soon as the armistice was signed, the epidemic stopped almost immediately, that, I say, this might be construed to mean that psychology had a great deal to do with that awful scourge. See, how quickly, after all fear, worry, and hatred was allayed and the people took on a more cheerful attitude, health, and not sickness, again became the rule.

If this doesn't find the waste-basket, maybe I'll come again some day; and talk not so ramblingly. Here's hoping that the whole *Clinic*, yes, the editors included, may take a long auto-tour during the coming summer or autumn!

ALLEN C. ADAMS.

Kusa, Okla.

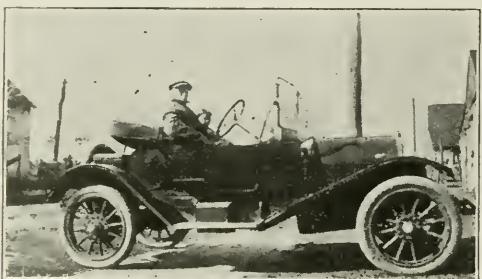
PREVENTING BLOWOUTS, ALSO, A GOOD LOCATION FOR A YOUNG MAN

First of all, I think, by this time, that my automobile is indispensable. I bought my car in July, 1914, and learned to run it without much trouble. So far, I had

only an occasional puncture and one real blowout. I may mention that my car is an "Overland roadster."

I never exceed the speed of 20 or 25 miles an hour. I tried out its speed only once, when a smart Aleck tried to pass me with a little Ford. His Ford rambled right along, but, it didn't ramble fast enough. The roadster rambled faster, having a longer wheel-base. Tom Adams—he that ran that race, is dead now and I don't know when I shall have another race with him, even after I get "over there," because he was expelled from the Christian church for swearing, and there is no telling where he is. I am an oldfashioned Lutheran.

The only disadvantage with an automobile, to me, is the time of the year during January, February, and March, when business is the most brisk, but, the roads are such that I can not use the car. When I



Doctor Batdorf.

first began using my automobile, everything seemed awkward to me and it took me longer to rig up the car than it did to get my horse ready. I used to tell my patients that, whenever I get very much in a hurry, I take "Major"; a horse that I had then, and I could beat the car nearly every time. Now, at this time, I am thinking different. Old Major is dead and I am depending wholly upon my car. I don't turn the wheel over to anybody now, and I am bordering close on to 70 years of age, too.

Now as to caring for my automobile. I do that mostly myself, too, during leisure time and in an emergency.

And now for the benefit to my brother practicing physicians who are so unfortunate as to have to eke out a living by practicing medicine during the coldest and roughest weather of the year out in the country and who want to save themselves

the trouble and expense by preventing blowouts and punctures I will say that I have the remedy. I can positively guarantee prevention of blowouts and fully 90 percent of punctures, if they will let me



The Doctor and His Successor.

furnish their cars with the proper equipment. It makes no difference whether it be old or new tires (better to have new ones). Prices depend upon the size of the tires.

I have no pictures, at present, of my home that would be suitable, but, I will inclose one of myself and a 9-year-old representative. Regret not to have one with wife.

By the way, if any younger man happens to see this and would want a place like mine, I will sell the place, farm, and all, with a pretty good practice thrown in, except wife, son, and white dog.

E. P. BATDORF.

Chula, Mo.

IT'S A FORD

I will say as a practical business car and for least expense in upkeep, after



Dr. Frank Bates, and Family, and the Ford

some years of experience I have settled down on the Ford as the practical car for a doctor. With the same amount of time

and attention that would be given to a horse and buggy daily, any man can keep a Ford in perfect running order.

I have seen a great many things used to keep carbon from forming in the engine. The best thing I have ever used is $\frac{1}{2}$ to 1 oz. of cylinder oil, put into each gallon of gasoline. Try it, you will be surprised how long the spark-plugs and piston heads will remain clean and the engine will run smoothly.

Will also say the Hastler shock absor-

then he took four months' training in war surgery, in Bellevue Hospital. To France Sept. 1, 1918, in Tonl Base 82, was on duty 48-hours shifts at times, during the battles of the Argonne, Verdun, Rheims, and St. Mihel. Is on the job yet; says he will stay until the last wounded and sick soldier is ready to come home to the good old U. S. A. He is a patriotic son of Uncle Sam, and mine with whom I am well pleased. He is in Base Hospital 91, Comercy, France, since March 1, 1919.

This photo was taken while in medical training. He wears a captain's uniform now.

FRANK BATES.

Coalgates, Okla.

WHAT I DON'T KNOW ABOUT AUTOMOBILES

Your request for an article on "what I don't know about automobiles" has been received. I thank you for the compliment implied. Were I an expert, I might be able to condense my lack of knowledge into one article. I suspect, however, that your were in a facetious humor when you dictated that letter, as it is a matter of general information in this neck of the woods, particularly among all the neighboring garages, that I have been driving my car only long enough to scratch the paint from the two front fenders and to bend my bumper into a obtuse angle.

I am reminded of our old friend Ezra Kendall, who said, "I went to the doctor to learn what ailed me, and the doctor said: 'You ought to take off flesh. Get a car and get out more.'

"And, so, I got a car and got out more", says Ezra. "I got out six times in one block and took off a little flesh in four different places. The last time I got out was through the windshield. That was the time I took off the most flesh."

Then he goes on to say that he was under the car on one occasion, when the car started of its own accord and boomed down the street. Uncle Ezra started to run after the car, and, as he did so, he met his doctor friend. Said the doctor: "Well, Mr. Kendall, I see you are following my advice." "Yes," says Ezra, "I've followed it now for about four blocks, and hope to catch up to it in the next two."

Well, that's me, all right. When I drive into a public garage, there is a general



Capt. Jesse A. Bates, M. C., U. S. A.

ers will make a Ford ride like a palace car.

Have been in practice 27 years. Have read CLINICAL MEDICINE 20 years. Can't get along without it and my Ford.

[Doctor Bates encloses a photograph of his son, who is in military service in France.—ED.]

Capt. Jesse A. Bates is in Comercy, France, with Base Hospital 91. Trained in medical corps at Fort Riley, Kansas, then in the Base Hospital, Camp Crane, Pa.,

scurrying to cover on the part of the inmates and lively wagering as to which of the cars, and how many, I shall bump in my manoeuvres to back into a stall.

These few remarks will indicate my ability to write a series of articles for you on "what I don't know", to cover a period of one year, at least. You may, therefore, consider this as merely a preface to the series.

Whether or not I shall be able to find the time to finish the series, I can not say now. Probably not. In the first place, I must earn a living for myself and family, also earn enough to maintain my various and assorted insurance-policies—covering fifty-seven varieties of protection, all of which I feel very much in need of at this writing—in the second place, there are thirty-one separate and distinct places on the car that need greasing each week, to say nothing of oiling. I know that much, at least. Where all these various and sundry grease-cups and camouflaged oil-holes are located, I still have to learn. I am dubious as to whether or not I ever shall attain to this high mark of mechanical expertness.

I often wonder why my car runs at all. I tremble to think of the day when I shall be called upon, by force of circumstances, to remove a punctured tire and replace it with that spare tire. If there is a garage within ten miles, I either shall walk or ride in on a flat tire and leave it to George. I pride myself that I am now able to think of three things at one time before starting out—Gas, Water, and Oil. Beyond these, there are unexplored mysteries that I hesitate to invade.

I have just overcome the evil habit of stepping upon the accelerator in place of the brake when I find myself approaching a yellow demon taxicab bent upon my evident destruction. I am beginning to believe that the less you know, or think you know, about a car's internal anatomy, the better your car will run.

Seven different car-owners, all with more or less experience—having driven at least 5,000 miles, which distance seems to be the dividing-line between the novice and the graduate driver—gave me seven different reasons, last week, for a pronounced squeak in my car. One said, it was the engine—another, the springs—still another, the body, and an expert diagnosed it as "tire-squeak", whatever that may be.

A layman—that is, one of the few remaining curiosities that still have to invest in a car, finally gave me the advice that I followed and that gave good results. It seemed to be the most simple form of treatment, so I tried it. My friend said: "Get out into the country and tune her up to about forty, turn a couple of corners at this speed, and shake out the squeak". Taking my wheel in hand, with my life-, accident-, and liability-insurance policies tucked away in my pocket, together with my identification-tag, I tried this system, without enjoying an accident. And, when I took the car out of the garage the next morning, the squeak, sure, had disappeared and there you are. Where the aforesaid squeak, or whatever it was, had its abode, will forever remain a mystery, so far as I am concerned.

I encountered a chap at the garage last evening, who volunteered to explain the mechanical construction of the engine, starter, and brakes in my car. He talked for an hour without interruption or question on my part. I dared not ask a question lest I display my ignorance. I simply looked wise and grunted now and then to show that I still was listening. That is all I was doing; listening. What he was saying went over my head. He might as well have been talking Spanish or Choctaw, or some other foreign lingo. His detailed description of ignition-systems magnetos, cams, pistons, crank-pins, valve-seats, overhead-valves and valve-clearance was merely a jargon of words to me and without sense. How anybody can learn this jumble about a car, without actually working in the factory and being brought up on a bottle of lubricating-oil and studying nothing but mechanics in kindergarten, grammar school, high school and college, will always remain a source of wonder to me.

If I ever get time to write the article for which you asked me, on "what I don't know about the automobile", I am going to start with the spark-plug and continue back to the spare tire on the rear, devoting one chapter to each attachment, piston, crank, and other device in the car. This, I figure, will give you material for fifteen years and a ten-thousand-page book. If you agree to pay me ten dollars an article, I'll quit a millionaire. Please, let me know whether you pay by the yard or the cubic

contents. I will now shut off the gas and coast down hill to dinner.

Yours ought-to-be-ographically,
S. DEWITT CLOUGH.
Chicago, Ill.

A VACATION-TRIP THROUGH THE COLORADO ROCKIES

Heeding your request for suggestions as to where doctors might spend their summer vacation, I will tell your readers of the trips I took last fall, this being the second vacation I have taken since 1885.

I have a daughter living in Denver, Colorado, with three of the nicest children one would wish to see. (Sure, are not they my grandchildren?)

My wife and I left Columbus, Ohio, on September 5, over the Pennsylvania railroad to Chicago. Then, the next morning, we took the C. B. & Q. for Denver, arriving in Denver on Saturday at 3:00 p. m. The folks met us at the depot, children and all, and we drove to their home.

On the 12th, they drove us in their large machine to the Rocky Mountains, passing through Golden at the foot of Lookout Mountain. From there, we drove up the mountain, where Buffalo Bill was buried. From this grave, we can see as far as the eyes will look, all over Denver, 15 miles distant. Then we drove on top of the mountains to Genesee Mountains, and from this mountain we drove part way down to a nice park and ate our lunch. Returning home, we passed through Bear Creek Canyon, where the granite rocks were almost perpendicular for 1200 feet, with just room for the road and creek.

The next trip was to Estes Park, about 80 miles from Denver, a park in the plains between the ranges of the Rocky Mountains. Going to the park, we went through Verens Canyon, the scenery on the way being one of the most beautiful. The park is a large very nice place, with plenty of fish, if you care for fishing, while homes can be rented as wanted. My wife and I walked up part way on a mountain close to Thomson's Peak, one of the high peaks of the Rockies. There was plenty of snow on the mountains. As we had but two hours to spare, we did not get to see much; however, the scenery going and coming made up for that.

On our return-trip, we came through the Great Thomson Canyon, 25 miles long and

so narrow that nearly half the time the driver had to give his signal, for fear of bumping into some other vehicle. This canyon was a grand sight. My neck was sore for several days, after having tried to see the sights in front, rear, both sides, and straight up all at once.

The next trip was to Colorado Springs, 80 miles from Denver. We remained there over night, and I must say that Colorado Springs is the nicest town I ever struck. In the morning, we left for Cripple Creek, Victor in the gold regions, passed through Manitou, the great soda springs, and through the noted great Utah Pass—the route that the emigrants took to reach the gold mines of California. One old Indian, in his big wigwam, was at the entrance to sell his photographs.

We passed through Cripple Creek to Victor, where we took lunch. The gold-mines are as thick here as the oil-wells are at Sisterville, West Virginia. On going up the mountain from Victor, we were up so high that our machine failed to work; so, we all had to get out and walk. We walked about two miles; but, then, this was a pleasure. Just before reaching the top, it sprinkled a little, but, on investigating, we found that the rain was below us. We were then on the opposite side of Pike's Peak from what we had been in the morning. In fact, we were in sight of Pike's Peak all day. We arrived at Colorado Springs after dark, after a ride of 160 miles, and I did not feel as tired as I had been on many occasions after driving 30 miles in a buggy.

Next morning, it was bright and clear, and we started out for another look. We passed through the great William's Canyon to the Seven Falls, where the water makes seven falls from the top to the bottom. Here, steps had been cut, stairlike, right on the mountain, winding back and forth, clear up to the top of the falls. A few started to climb the steps, and my wife was the only woman brave enough to go up to the very top; but, I would not undertake the journey if I were offered the whole state of Colorado. From there, we drove up another steep mountain, to the Cave of the Winds. Going up this mountain, the road was narrow and there was but little protection on the lower side of the road, on which I was. Really, I was scared to death during all that trip. This cave was discovered by two boys, in 1880,

while they were hunting. It contains 17 rooms, the largest measuring fifty by three hundred feet. All the rooms are lighted with electricity. There is not a mark or scratch there made by man, except the wiring and a few steps at times to lead from one room to another. The cave is 300 feet from the top of the mountain. The rooms are fancifully named, and the guide told us that in the room designated the "Bridal Chamber", several weddings had been celebrated. About one room he said that, if any lady wished to get married inside of a year, she simply had to place a hairpin on the wall; and, looking to where he pointed, I suppose I saw thousands of hairpins scattered about.

Passing on, we took in the Garden of the Gods. This, indeed, is a wonderful sight. We were shown there two petrified bodies of old Indians supposed to have lived 50,000 years ago.

I should have liked to take in Yellowstone Park, but, could not leave my work for so long. I will say that if anyone wants to have a nice outing to enjoy himself, let him take this trip; for, I know that one could not see more at any place and enjoy himself during three weeks any better than I did on that memorable jaunt. I will add that all along the road we could see the cute little prairie-dogs, sitting by their holes, into which they would disappear in a twinkle when we gave chase.

T. R. MASON.

Columbus, Ohio.

FOR A VACATION-OUTING IN IDAHO

I am following your injunction not to let procrastination prevent my sending an invitation to the CLINIC "family" to visit our grand state of Idaho this summer in the event of any of you taking a vacation-trip by automobile. Here, we have one of the most stupendous, phenomenally sublime wonders of the world in the Yellowstone National Park. Description is unnecessary and superfluous. Then, all through this state, there are so many beautiful drives that beggar description, that there is little choice in the matter. Wherever you go, there you will be surfeited by the glories of nature's pristine beauties. On the same trip to the park, you may divert your itinerary and visit the famed Jackson Hole country, over roads that are good for

the most part. The grand Teton Mountains, reflected in the bluest of lakes, that is fed by the streams that abound in trout, to the joy of the amateur as well as the scientific fisherman; the tall dignity of the whispering pines that line in majestic columns the winding charm of the naturally good roads; the pleasant enjoyment of the bird-shooting in season; the thrilling hunt for big game; all contribute to make a trip through central and eastern Idaho one to be remembered for many seasons.

True, the small pests that usually make an outing so uncomfortable are ever present during the early summer; however, after the middle of August, they trouble but little.

One feature of the trip that, once experienced, is never forgotten is, the hospitality of the rancher met with en route. It is of the west, breezy and whole-hearted, unaffected and unselfish. Exceptions there are, of course. Some of these are of the sagebrush type, gray and forlorn, yet, of a tang as of the sage after rain.

In the park-region, there are to be found numerous fine hotels. In the small towns, accommodations are fair; although in the average ranchhouse the beds are not trumpeted as cures for insomnia. The food, though, usually is good and substantial. Supplies may be obtained without trouble; the larger towns are prepared to do any ordinary repair-work; maps showing auto-roads and garages, are available, thus making the trip a pleasurable and comfortable outing. There is little rain, in Idaho, during July, August, and September. The roads are fair to excellent and one may travel as one wishes, fast or slow.

Of course, there are disadvantages incident to any cross-country travel. Thus, from Pocatello, the first stretch of the road is through a desert region, the going being smooth, and it may be dusty enough. Just ahead, however, there awaits a good hotel with its bath, or, if you are camping out, a deep swimming-hole may be found conveniently placed.

R. G. SMITH.

Pocatello, Idaho.

OUR REGRETS

We have several other good articles, but —there is no room for them. They will be printed, however, in the July issue.

Just Among Friends

A DEPARTMENT OF GOOD MEDICINE AND GOOD CHEER FOR THE WAYFARING DOCTOR

Conducted by GEORGE F. BUTLER, A. M., M. D.

The Actual and the Ideal

IT seems germane to the general scope and motive of a physician's labors, in an age when education has acquired new and paramount importance, to consider the underlying principles which animate the pursuit of special knowledge and their evolution as an ideal process, as well as their bearing upon life, thought and character. Directly, let us consider the relations of empiricism to that nobler development of spiritual excellence which learning can only foster and which the highest attainment of science, the attainment destined to ameliorate the conditions of mankind, can but signalize and dignify. Let us look dispassionately and in the light of Cicero's *recta ratio* upon the marvelous revelations of exact investigation, never losing sight of the object as a symbol in its mortal analysis or established classification and name, nor forgetting that the most brilliant achievements of the human intellect may at times wellnigh exclude the moral perceptions, the sentiment of adoration, the poetry and fervor of the soul's serener intuitions.

A German writer of eminence has boldly affirmed that the study of science conveys no lesson to the mind, save that of the power of changeless and supreme law. Think of it! Age upon age, cycle upon cycle, the intricate modification of created substance, the vast domain of animated life, the earthly philosophies that aspire to solve the mystery of their association—all have been, are, and will be, while destiny alone, unswerving destiny, guides the chariot, selects the route, and draws us toward one inscrutable goal! The stars of heaven speak not to us, the stars of earth likewise are dumb and, so far as the revelation of the unknown may aid us in our longing search, the very beauty that kindles in the breast the holiest aspirations and entralls imagination declares nothing! All is marvelously planned, insoluble in its revelations of cause and effect,

light and darkness, existence and void. One only sovereign truth is vouchsafed to mortal understanding—the omnipotence and majesty of law. That we faintly comprehend, yes, partly realize in its tangible results: beyond this, nothing save the dull, pitiless wail of human limitation!

Is it possible to conceive a more chilling theory of creation or a more fatalistic philosophy? As the senses recoil from the contemplation of so hopeless a knowledge, so the might of inner consciousness proudly refutes its blighting logic.

And, yet, it is from the annals of beloved science that these gloomy deductions have been largely drawn. Truly, if we examine closely, the responsibility of science in the matter is considerable, since the freedom and attendant irreverence of modern thought, culminating in the dreary question, "Is life worth living?" appear traceable in no small degree to the startling impetus given to the restless spirit of the age by the discoveries and influence of scientific research.

Mr. Buckle, in his comprehensive treatment of the French revolution, while tracing the genesis and development of the ideas whence sprang that frightful despair, has shown that the contemporaneous achievements of science, the apparently irrelevant investigations of Bichat and others, no less than the fiery sneers of Voltaire, aided in fomenting the madness of the times. Nor, indeed, has that melancholy delusion of distrust faded, since that day, in lands where science has been crowned with fairest attainment.

What shall we say? It were as monstrous to deduce from an innocent source any given perversity of human intellect as to infer from scientific truths the heartless formula of materialism. Let us concede that the primary condition of inexorable law impresses the imagination powerfully in tracing the principles and correlations of creation's infinite substance. Yet,

in that law, are harmony and order, which in themselves but typify the Beautiful, at once transporting the mind to that higher sphere of emotions, of which gravitation, attraction, repulsion, light, form, color are but the handmaids and servitors.

Verily, the undevout astronomer is mad, and the apothegm is no less applicable to him who, working in any field of science, discovers the hidden relation of animate to inanimate things or amid the arcana of microscopic study unravels by degrees the tangled skein of nature's mystery. But, to the reverent observer, what a world of marvelous design, of endless gradation and subtle adaptability is by the light of scientific knowledge gratefully revealed! To such a philosopher (to use Faraday's favorite term), actuated by the spirit that should pervade all thoughtful investigation, the living miracles of earth speak with thrilling emphasis. The original impulse, the creative thought, still baffles analysis, nor can finite comprehension aspire to read unerringly the intricate details which infinite foresight has planned. Yet, the vivifying truths that they bear to mortal understanding, the grandeur of speculative thought which they suggest are enough to strengthen and uplift us; and, in their written history, as revealed to more enlightened perception, there is unfading illumination and delight. And in the still nobler attitude inspired by contemplation, by the enkindled imagination, which, by its ideal and divine faculty, ever transmutes and integrates the barren facts of life and duty, we reach the truly abiding insight, the philosophic truth so finely portrayed by Wordsworth:

. . . for, I have learned
To look on Nature, not as in the hour
Of thoughtless youth; but, hearing often-times
The still, sad music of humanity,
Nor harsh, nor grating, though of ample power
To chasten and subdue. And I have felt
A presence that disturbs me with the joy
Of elevated thoughts; a sense sublime
Of something far more deeply interfused,
Whose dwelling is the light of setting suns,
And the round ocean, and the living air,
And the blue sky, and in the mind of men.

It can not be well questioned that, in an age distinguished for intellectual progress, the splendid power of science has directed the thoughts of men more than ever before to purely rational triumphs, whereby the qualities of strength and practical excel-

lence are advanced as criteria of permanent value, rather than the gentler elements of human character, which, in the alembic of earnest experience, possess a refining energy not easily apprehended by reason alone. The immense benefits accruing to mankind from the results of medical science; the larger science of daily life as related to physical wellbeing, which has been unfolded by the labors of thoughtful students everywhere; and the brilliant record of those exact investigations which are designed to elucidate and utilize a hundred arts upon which material prosperity largely depends—these signal services have exalted the bright genius of modern times, sprung glorious from the accumulated grandeur of the past, like Pallas from the head of Zeus, and established it here in the admiration of the world.

It simply is impossible to overestimate the debt we owe to scientific toil. Whatever may have been the motive that prompted inquiry—whether it be the fervid love of knowledge or the more objective consideration of human welfare—the end has ever been, and must be, the increase of individual and general happiness. Even against the invention of "villainous saltpeter" reflection places those means of lightning communication among nations that are destined, we may fairly believe, to avert more and more the barbaric passions of men, shaming kings to a decent regard for honor and humanity.

Yes, let us not degrade the claims to veneration, confirmed by years of gratitude, nor derogate from the domain of science the riches bestowed upon her beneficiaries. Yet, when all is justly accorded to her and fitting meed awarded to the untiring perseverance, the flashes of inspiration, the noble endeavors which have borne fruit a thousandfold, there still remains the world of spirit—that other, that immortal life, which, without the marvelous knowledge acquired by the aid of lens and crucible, still would shine on with undimmed loveliness; which, pulsed with life, graced the earth, tended the poor, and dwelt in lofty meditation ere Archimedes or Newton or Harvey breathed or the heavens were scanned with eyes other than those of simple adoration and delight.

It is this life—the deep, unuttered aspiration of the soul, the silent appeal upwelling from a heart of trust—which science, as an intellectual force, can not com-

pass or define. The laws by whose operation the eternal order is established speak not to that inner consciousness, save so far as they reveal a living principle, a principle related directly to the thought, the feelings, and the ideal longings which render man heir to all beauty, truth, and love, and in the retired chapel of reverie steal upon his listening fancy like voices from an unearthly realm. In such a mood, creation appears far other than as scrutinizing analysis interprets it. We see, at last, that the marvelous plan of harmony and beauty that encircles us is but the outward reflection and symbol of the divinity which, inwrought in our being, discerns only the objects of its natural quest.

It were, indeed, idle to disparage the purely intellectual achievements that have so crowned our race with honor and given us all that we know of the secrets hidden in the vast treasury of nature; yet, we may proceed beyond the palpable, the visible, the ponderable attainment and, turning inward in our ultimate search for truth, confess that the intellect alone, guided only by its progressive instincts, may, like the steeds of Phaeton, lead to destruction.

And here, since our studies comprise a severe test of mental grasp and power, it may be pertinent to consider what, after all, is the true purpose of that training included in the term "education", so vaunted by the world at large and forming in our own country a rational pride. It has been wisely remarked that what we call education is, often, less important than what is denied the name. It seems at times that the curricula of our common schools and colleges were modeled after the principles of Mrs. Lincoln's "Cook-Book": so much of this, so much of that, a bit of many and inscrutable ingredients, a very brisk fire, and, presto! behold our masterpiece! Alas! how much has been omitted, how carelessly has the mixture been prepared!

And, the fire has scorched, when a gentle heat had assured success, and the seasoning is all wrong!

It is easier, to be sure, to criticize existing methods than to devise a practical scheme of instruction that shall be amply qualified to respond to the peculiar exigencies of American life, in which station and ability can never safely forecast, when the dullard of today becomes the shining light of tomorrow, and, when, again, early promise is lost in the experience of later years.

What is being taught is even of less consequence than is commonly supposed, and the true benefits of our schools and colleges we do not discover until, in riper life, they are seen in far retrospect. What we can do in the sacred calling of tuition is to bear in mind that, above all empiricism and factitious, however brilliant, acquirement, stands, as the highest end attainable, the molding of a noble character.

This alone can aid us everywhere, at all times, in rising superior to worldly obstacles, preserving, through victory and disaster alike, the peace and dignity of a conscience unconquered by earthly vicissitude, unsullied by fiercest temptation.

The show of knowledge is as tinsel ornament compared with the pride of sterling worth, and a single generous impulse warm from the heart is of more value to ourselves and others than is selfish accomplishment. The one springs from ideal virtue, the other may be only the beguiling glitter of unreality.

And, when we come to consider closely —what are the requirements of a degree of proficiency which, in an average assembly, would elicit admiration? Imagine for a moment the terror inspired by one who had assimilated two works alone, a moderate-sized encyclopedia and Webster's Dictionary! Peruse with equanimity, if you can, the pathetic and abnormal life-history of Heinecken. Read, and beware!

[*To be continued.*]



Among the Books

HARRISON: "VENEREAL DISEASES"

The Diagnosis and Treatment of Venereal Diseases in General Practice. By L. W. Harrison, D. S. O. London: Oxford University Press. 1918. Price \$7.50.

The author of this book says justly that venereal diseases have a claim on our attention not only because they provide a field for scientific research but even more because they levy a serious toll on the national resources of every country. The recognition and treatment of venereal diseases is quite as serious and important a subject as that of tuberculosis and other diseases that are far-spread and impose suffering and expense upon their victims. The attitude of physicians has too long been one of impatience, if not of disgust, with regard to venereal diseases. Their study should be undertaken with a deliberate eye to their prompt relief and also to the protection of those with whom patients might come in contact. The author, who is a medical officer in the British army, has naturally benefitted largely from his immense experience with venereal diseases in war time. His book is well written and beautifully illustrated.

GRAY: "WAR WOUNDS"

The Early Treatment of War Wounds. By Colonel H. M. W. Gray. London: Oxford University Press. 1919.

The publishers of the Oxford Medical Publications, Henry Frowde and Hodder & Stoughton, have presented to the medical world a not inconsiderable number of contributions to medical and surgical literature, more especially that dealing with emergency surgery. Doctor Gray's book on the early treatment of war wounds contains the valuable experiences of himself and other workers during the great war in which the early treatment of wounds, the prevention and treatment of shock and collapse and operative procedures in all

types of injury and many other problems have received close attention with the result that the advance in this and many other matters has been very marked.

While the war has come to a close some months ago, the experiences gained during its progress by no means are superfluous at this time. Indeed, in the many problems of industrial surgery, the experiences of war time surgery will prove of immense benefit and, no doubt the lessons learned in this war will make for better results in the recovery from industrial accidents than those that were secured in former times.

WALL: "PRESCRIPTION"

The Prescription, Therapeutically, Pharmaceutically, Grammatically and Historically Considered. By Otto A. Wall, Ph. G., M. D. Fourth and Revised Edition. St. Louis: C. V. Mosby Company. 1917. Price \$2.50.

Wall's book on prescription writing by no means is unknown to physicians. It is a generally accepted fact that the writing of good prescriptions is an art that has largely gone out of fashion. Yet, there is manifest a commendable tendency against the ordering of ready-made combinations, in which too often the attempt is made to fit the patient to the remedy rather than the remedy to the patient's condition, as really should be done. To write a good prescription requires brains and knowledge. Good prescription writing, deliberate and purposeful ordering of medicines is a very important part of the treatment and it is the part that will impress patients, and, naturally, the druggists through whom the prescriptions are ordered and who very often have a greater influence upon the anxious relatives of our patients than we are always conscious. If a druggist sneers at a prescription because it is written carelessly or faultily, the patient's messenger naturally receives the impression that the doctor has "made a mistake". Although that does not necessarily follow, the mental

effect upon the patient and his family is unfavorable and may seriously interfere with the progress of the malady. For this, as well as for many other reasons, it is well to study prescription writing with great care. Doctor Wall's textbook is one of the best guides on this subject with which we are familiar.

"SQUIBB'S ATLAS OF THE OFFICIAL DRUGS"

Squibb's Atlas of The Official Drugs. By William Mansfield, A. M., Phar. D. New York: E. R. Squibb & Son. 1919. Price \$2.00.

Squibb's Atlas of the Official Drugs is a very compact, complete, and up to date handbook on pharmacognosy. Although physicians no longer gather—or buy—"roots, barks, and herbs," to prepare therefrom their own remedies, still it is desirable that at least they know something about the character of the original source of the "elegant preparations" supplied them by the pharmaceutical laboratories. Not a few men prescribing *vinum colchici* (or *colchicine*) would fail to recognize a *colchicum*-corm when shown, and certain therapeutic nihilists even might have to plead ignorance as to the exact nature of a corm!

Squibb's Atlas not only describes all the official drugs, but, provides helpful photographs, so that information, such as no verbal description could convey, is readily gained from these pages. The drugs are classified and grouped and under each one is given its title, abbreviation, English name, synonyms, botanical origin, part used, permissible limit of impurities, assay, habitat, physical description (odor, taste, etc.), and official preparations, if any.

To students of medicine and pharmacy, this Atlas is an essential aid, and the physician owning and studying the book will find his therapeutic horizon widening and his ability, to use medicines intelligently, materially increased.

ROBINSON: "INCOMPATIBILITIES"

A Treatise on Prescription Incompatibilities and Difficulties Including Prescription Oddities and Curiosities, For Pharmacists and Physicians and Students in Pharmacy and Medicine. By William J. Robinson,

Ph. G., M. D. New York: Critic and Guide Company. 1919. Price \$3.00.

A book like the one before us carries its own recommendation in the title. It is often said that the art of writing good prescriptions has gone out of fashion. We don't believe that this is true even though it must be admitted that the prescribing of medicines has been much simplified, partly through the introduction and popularization of active principles, alkaloids and others, partly through the production of synthetic remedies, most of which originated in Germany. However, there still are numerous remedies that are called for under many conditions and which, sometimes, it seems desirable to order in combination. Here is ample opportunity for being enmeshed in difficulties and for producing mixtures which, in the least objectionable case, are unsightly while they also may be actually poisonous.

Often it is impossible, or at least difficult, to remember the interaction of certain remedies that may be combined in a prescription. Attention is not paid to the reactions that may take place on certain remedies being mixed, and then trouble may result. Physicians owe thanks to Doctor Robinson, who is not only a physician but also a pharmacist, for collecting a great amount of information on "How not to do it." A study of the prescriptions presented in this book, and criticised, can not help but carry a valuable lesson and to make the student a better prescriber and a better compounder of medicine. We recommend Doctor Robinson's book cordially, and sincerely hope that it will enjoy the popularity that it rightly merits.

HOWELL: "PHYSIOLOGY"

A Text-Book of Physiology for Medical Students and Physicians. By William H. Howell, Ph. D., M. D. Seventh Edition, Thoroughly Revised. Philadelphia: W. B. Saunders Company. 1918. Price \$5.00.

The fact that Howell's textbook of physiology has appeared in seven editions in the course of thirteen years speaks well for its usefulness. It is one of the well established and recognized textbooks on the subject.

While physiology is one of the fundamental sciences of medicine and surgery, its study should by no means be neglected by the practitioner. Many times the in-

vestigation and appreciation of pathological processes will be made easier and will have more useful and beneficial results if it is remembered that pathology is abnormal physiology and that for a greater understanding of pathology a true knowledge of physiology is essential. For this reason, a textbook of physiology, like the one before us, is appropriate for the study of physicians as well as of students.

PAGE: "CARBURETORS"

Gasoline and Kerosene Carburetors: Construction — Installation — Adjustment. By Victor W. Pagé, M. S. A. E. New York: The Norman W. Henley Publishing Company. 1919. Price \$1.50.

This is a simple, comprehensive and authoritative treatise for practical men explaining all basic principles pertaining to carburetion, show how liquid fuels are vaporized and turned into gas for operating all types of internal-combustion engines intended to operate on vapors of gasoline, kerosene, benzol and alcohol. All leading types of carburetors are described in detail, special attention being given to the forms devised to use the cheaper fuels such as kerosene. Carburetion troubles, fuel-system troubles, carburetor repairs and installation, electric primers and economizers, hot-spot manifolds and all modern carburetor developments are considered in a thorough manner. Methods of adjusting all types of carburetors are fully discussed as well as suggestions for securing maximum fuel economy and obtaining highest engine power.

HIRST: "OBSTETRICS"

A Text-Book of Obstetrics. By Barton Cooke Hirst, M. D. Eighth Edition, Revised and Reset. With 715 Illustrations. Philadelphia and London: W. B. Saunders Company. 1918. Price \$5.00.

The first publication of Hirst's "Obstetrics" occurred twenty years ago. Since then, a new edition has been issued on an average of every two and a half years. This alone is evidence of its popularity; and the proof that it is established on a solid foundation of favor with students and physicians is rendered all the stronger by the fact that, in the meantime, we have had a perfect deluge of textbooks on ob-

stetrics, most of which are mere compilations and have no excuse for existence beyond the author's desire for fame. In the interest of conciseness, Professor Hirst has, in the present edition, shown the courage to use the pruning knife freely. It contains 150 fewer pages and 180 fewer illustrations than the seventh edition; and a careful comparison shows that nothing valuable has been sacrificed, while greater clearness has been attained. For a decade or more, the progress of obstetric science has been hampered somewhat by visionaries who have proposed methods of procedure that can best be characterized by the slang term "fads". The favor which Professor Hirst's work has found with the conservative and clear thinking members of the profession is due in no small degree to the fact that he has lent no countenance to those vagaries that have a plausible sound but which might prove dangerous to public welfare in the hands of the inexperienced.

THOMSON: "CLINICAL MEDICINE"

A Treatise on Clinical Medicine. By William Hanna Thomson, M. D., LL.D. Second Edition, Revised. Philadelphia: W. B. Saunders Company. 1918. Price \$5.50.

Doctor Thomson's treatise on clinical medicine affords unusually attractive reading. The Reviewer was much interested in studying the introductory part of the volume which contains a chapter on "catching cold", another one on the significance of common but important symptoms, such as pain, emaciation, cough, dyspnea, edema, vomiting;—and, finally, a chapter on remedies, non-medicinal, medicinal, and biological.

Doctor Thomson's views oftentimes are original, certainly they have become his through careful investigation and study whenever they have been acquired from other sources. It may be said that the author of this book is a confident therapist, as everyone must be who employs suitable remedies of proper composition, and make, and in indicated conditions. Readers of CLINICAL MEDICINE will welcome this treatise because it contains a wealth of practical knowledge and guidance for meeting the everyday problems of the general practitioner.

Condensed Queries Answered

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report their results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

Queries

QUERY 6428.—“Mucocolitis”. L. V. M., Massachusetts, has a patient to whom the contents of 7 boxes of a bacterin, containing killed streptococci, pneumococci, colanbacilli, and mixed staphylococci have been administered, with, however, little improvement. The contents of the first 2 boxes seemed to work wonderful results; then, during an interval of several weeks, when the bacterin could not be obtained, the patient’s condition went back again.

“This patient, a woman of sixty-eight years,” L. V. M. writes, “has been afflicted with mucocolitis for over a year. No form of internal treatment has helped her in the least. She experiences almost constant pain, has mucous discharges and much distention of the colon by gas, and has lost considerable flesh.”

It seems to us, doctor, that, even in a woman sixty-eight years old, an attack of this sort might be amenable to treatment, providing you have the full and unconditional cooperation of your patient.

We have here: the entire colon-tube irritated to such a point that the mucous lining exfoliates constantly, leaving the underlying layers sore and tender. In consequence of insufficient defense, the food remnants that pass through this tube ferment and the bacterial flora leads a free and untrammeled existence, causing a great deal of putrefaction, distention with gas, pain, and other signs of disease.

First of all, this colon should be emptied and kept as clean as possible; then the harmful bacteria must be counteracted; and, lastly, measures must be taken to strengthen the inflamed and diseased mucous membrane, while, at the same time, nothing is permitted to pass into it that can act as an irritant. In a recent case that came under the observation of the

present writer, he proceeded somewhat along the following lines:

First of all, a large colonic flushing with chlorazene-solution (of the strength of about 1-10 of 1 percent), using not less than 2 quarts of the reasonably hot solution. This was ordered to be retained just as long as possible, say for from fifteen to thirty minutes, then to be expelled.

Over the abdomen, on the first day (this was an acute attack), and when there was much soreness and, indeed, pain, a poultice of pneumophthysine was applied hot and in a thick layer.

By mouth, a bulgaricus-bacillus culture was given freely, in order to overcome the harmful intestinal bacteria, by increasing the number of lactic-acid bacilli. These were given in the form of tablets—two every two hours for several days is none too much, then four might be taken at 10 in the forenoon, 4 in the afternoon, and at bedtime, that is to say, on a virtually empty stomach. In any case, the tablets should be chewed fine and washed down with a moderate amount of water or milk, buttermilk sometimes being preferable. While the bulgaric bacilli are being taken, intestinal antiseptics naturally are contraindicated, for the reason that they would interfere with the action of the “friendly” bacteria.

In order further to diminish pain and soreness, hyoscyamine sulphate was given in 1-1000-grain doses, according to need. This alkaloid may be combined with small doses of codeine sulphate for as long as the additional narcotic effect is desirable.

In order to tone up the tissues of the colon, this writer prescribed, in the case in question, berberine hydrochloride, gr. 1-6; hydrastine hydrochloride, gr. 1-64; strychnine arsenate, gr. 1-128; to be taken one

such dose after each meal; and, eventually, physostigmine salicylate (1-1000-grain) was added to the foregoing combination each time. These alkaloids contributed in toning up the muscular tissues in the body generally, more particularly through the intestinal canal. They seemed to encourage the restorative power of the cells of the mucous membrane that was being lost continually, and they certainly aided (we are sure of it!) in overcoming the attack.

Another remedy that aids decidedly in promoting tissue regeneration is nuclein-solution, which may be given in 1-mil (cubic-centimeter) doses, hypodermically, once daily. If the solution is given by mouth, it must, of course, be taken on an empty stomach; for, otherwise, we do not know what is going to happen to it.

After the first cleaning-out of the lower gut by means of lavage, the continued gentle flushing of the intestinal canal should be secured by a mild laxative, such as, for instance, a laxative saline, liquid petrolatum or compound licorice powder. In some cases, phenolphthalein, in combination with senna and sulphur, works very well and without causing any irritation. The idea is, of course, to avoid anything that will produce hyperemia in the lining of the intestinal tract.

The food should be as simple as possible. We are inclined to favor buttermilk, junket, whey, and similar articles of food for two or three weeks or even for a month, and then gradually to enlarge the diet; permitting carbohydrates only in moderation, in order to avoid fermentation as much as possible.

We believe, doctor, that, if you proceed along about these lines, you surely will be able to procure considerable relief for your elderly patient, and we should be glad, indeed, to be informed by you of your eventual success.

QUERY 6429.—“Epileptoid Attacks?” W. J. T., West Virginia, presents the following history of a case he has on hand:

“A little girl, eight years of age, was first taken some weeks past with pain in the stomach, which at times extended underneath the heart; the child was exceedingly nervous, would suddenly get up from chair, throw both hands up in front of her and above her face and wave the hands back and forth, making a rotary motion up and down without, however, using the

elbow joints, raising the arms from the shoulders, the hands all the while clinched, the thumbs in the palms and fingers closed over them. Some days she had perhaps as many as eight or ten spells.

“Recently, at about dark, her lower limbs seem to give way completely she being unable, seemingly, to move them at all, so that she has to be carried to bed. Nevertheless, in the morning, the child gets up looking bright and walking without effort. She is playful most of the day; yet, when night comes again, the loss of power of motion of the limbs returns. The nervous phenomena of the hands are much less frequent since the trouble with the legs commenced, but, have not altogether stopped. The appetite is fairly good; the bowels are open, there being two actions per day, and a normal quantity of urine is passed, which is normal in color. The patient sleeps well, but is easily startled.

“Now, what is the trouble and what is the treatment and prognosis? Am giving strychnine, iodized calcium, digitalis and digestives.”

From the rather limited clinical data presented, it is absolutely impossible to make a diagnosis.

What is the family history? Are there epileptics on father's or mother's side? Any trace of syphilis? Have you examined the stools for worms? Are you quite sure there is not a retention of fecal masses? Examine nares carefully. Test the reflexes, especially the ocular and patellar ones. Note heart sounds, pulse rate, and condition of tongue. Send us a full report of your findings, together with a specimen of urine and a blood smear. In the meantime, place the child upon a very careful diet. Insist upon her spending most of her time in the open air. Wash out the bowels with copious enemas of warm physiologic salt solution, and bathe the entire body with epsom-salt solution, every other day.

Give neuro-lecithin, also scillitin, and zinc phosphide; further, irisoid and boldine, before meals; and papayotin after eating. If you are not quite positive that the intestine is thoroughly clean, give full divided doses of calomel, gr. 1-6, blue mass and soda, gr. 1-12, and podophyllin, gr. 1-6, at night, and follow with a saline draught the next morning.

There is, of course, a possibility of genital irritation. A lightly adherent clitoris-*hood* might give rise to very seri-

ous nervous disturbances, in like manner as the analogous condition in boys has been known to do.

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QUERY 6430.—Relationship between Infected Tonsils and Sterility in Women.” T. O. B., Wisconsin, refers to the observation that a great many married women that never had borne children became pregnant after the removal of their infected tonsils. The Doctor mentions that the Mayos present but few data upon this question, and, indeed, speak of it as probably being a mere coincident. Nevertheless, the Doctor avers that he knows that it is more than a coincidence.

This question was submitted to Dr. Henry R. Harrower, of Los Angeles, California, who favored us with the following reply:

“Frankly, I, myself, have not noticed such a connection between sterility and infected tonsils; however, since I have the opportunity right now, in several cases to go into this matter, I certainly shall do so.

I do know this, though, that infected tonsils are a prolific cause of thyroid disturbance; not necessarily obvious thyroid disease, but, functional dysthyroidism. This dysthyroidism may have the characteristics either of the hypo- or hyper- variety, and it depends a good deal upon the physiological substratum of the woman as to which reaction takes place. Suffice it to say that many physicians, besides myself, have established a very definite relationship between tonsillar disease and dysthyroidism.

“I mention this, because dysthyroidism has been shown, in more than one instance, to be associated with disturbances in the function of the ovaries, and I know of a number of instances of ovarian dystrophy definitely attributable to thyroid disturbance, and which, when corrected, had a very decided influence upon the ovarian function. It is not impossible, then, that the disturbance of the thyroid gland, when resulting from the toxemia or other derangements produced by the tonsillar condition, may indirectly be the cause of ovarian insufficiency, for, it is presumed that these cases of sterility to which the Doctor refers could have been only of a functional character, and are not a consequence of chemical changes in the vaginal secretion or owing to mechanical factors involving

the receptivity of the uterus to the impregnative ovum.”

“Many subtle factors are involved in the study of endocrinology, and it would be wrong for me to attempt any definite conclusion from what has gone before. However, it may be well for us, as physicians, interested in developing our faculties for serving humanity well and faithfully, to pay more attention to the possible connection subsisting between tonsillar infections and the internally secreting glands, and, through the derangements caused in them, to the body as a whole. In this relation, I might mention the case that I published in *The Pacific Medical Journal*, some years ago, of a young woman with a severe and strictly operable dysmenorrhea, but, who had a horror of anesthesia, and, therefore, refused surgical intervention; who also had an enlarged thyroid gland and some symptoms showing that the gland was affected, as well as the pelvic organs. She was suffering from a minor grade of pyorrhea and the ameba buccalis was positively present in her mouth. Suitable treatment with emetine modified the conditions in the mouth so satisfactorily that the thyroid gland was reduced and its irritability lessened, while, remarkably enough, the dysmenorrhea disappeared within two months.”

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QUERY 6431.—“Obscure Nervous Trouble.” W. G. T., West Virginia, writes as follows: “My reason for writing you is, that I am sorely puzzled as to the diagnosis of a case I have on hand. It is that of a girl of eight years, who was first taken some weeks past with pain in the stomach, which at times extended around underneath the heart. She was exceedingly nervous, would suddenly get up from her chair, throw both hands up in front of her and above her face and wave the hands back and forth, making a rotary motion up and down, not, however, using the elbow-joints, but, raise the arms from the shoulders, the hands all the while clinched, the thumbs in the palms, and fingers closed over them. Some days, she has perhaps as many as 8 or 10 such spells.

“Recently, at about dark, her legs seem to give away completely, and she seems unable to move them at all; she has to be carried to bed, but, she gets up in the morning, looking bright, and walks without visible effort. She is playful most of the day, but, when night comes on, this loss of power to

coffee. The thyroid gland still is somewhat enlarged. "She seems to be heavy enough, but, has not much strength."

You do not say anything about the blood pressure or the pulse rate, neither do you give us any idea about the character of her skin. In fact, from the picture presented, it is a question in our mind as to whether thyroidism really obtains or, at least, whether that is the basal pathological condition.

We should have the urine and blood of the girl examined at somewhat frequent intervals.

We can not think that it is desirable to administer those cathartic pills, neither should we limit the diet to bread, butter, and coffee; in fact, she should not touch coffee. Let her take plenty of vegetables, fresh fruits, milk, and Vichy water or buttermilk; also try whether you can not secure a more satisfactory intestinal condition by the use of liquid paraffin, together with, perhaps, some such combination as berberine hydrochloride, gr. 1-6; juglandoid, gr. 1-6; physostigmine salicylate, gr. 1-500; strychnine sulphate, gr. 1-64; oleoresin of capsicum, gr. 1-64; taken after each meal for a week or so; and a tablet containing podophyllin, leptandroid, irisoid, with nux vomica and capsicum, at 8 and 9 o'clock p. m., every second or third night. The next morning, the patient should receive a dose of sulphate of either magnesium or sodium, the mineral oil to be omitted on these days.

Insist upon frequent salt-water sponge-baths and have the patient spend as much time as possible in the open air, and instruct her in deep-breathing.

QUERY 6432.—"Pellagra." F. A. R., Texas, desires the "latest and surest cure for pellagra", as he has under treatment a young man who passes through the winter without trouble, but, who, as soon as spring opens, shows signs of the disease. His bowels are very loose now and he looks for the skin trouble to appear soon. He is about 30 years of age, has a family, and is very poor. His mother succumbed to pellagra.

We regret being unable to offer a "sure cure" for pellagra, while the various hypotheses as to the etiology of the disease that still are being advanced do not presage

a speedy agreement among investigators themselves.

However, while the importance of insufficient or badly balanced diet, which is incriminated by some as a principal cause of pellagra, is losing ground to a certain extent, there is no question but that malnutrition of a certain kind is a predisposing or contributory factor.

A very interesting article on the etiology and treatment of pellagra, contributed by Dr. J. H. Graves, appeared in *The Southern Medical Journal* for July, 1917, (page 547); also, during the past two or three years, very exhaustive articles upon the subject have been published in the pages of CLINICAL MEDICINE.

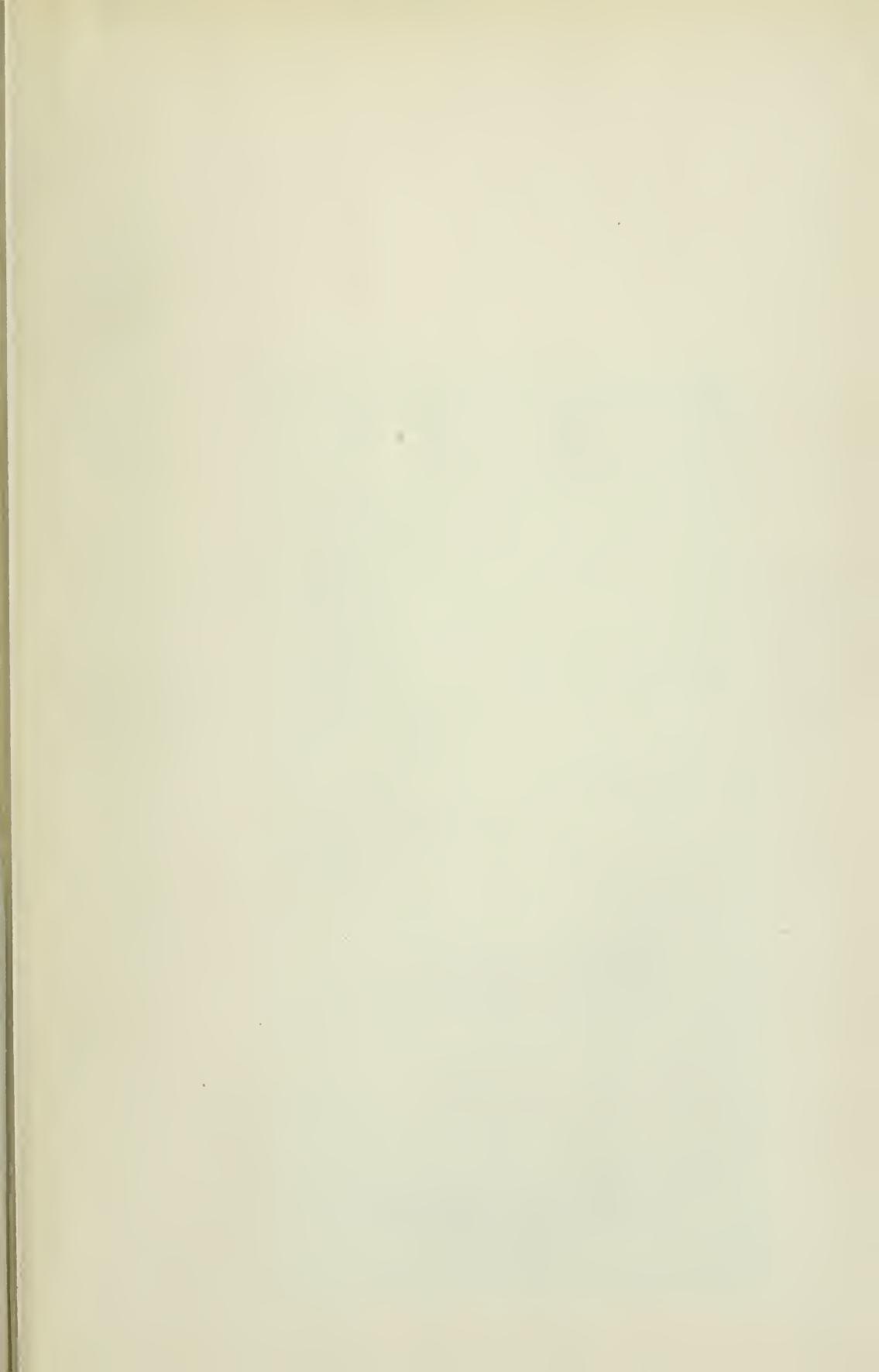
At the present moment, we believe, arsenic, nuclein, and calcium sulphide are the most effective remedies at command. A carefully balanced and highly nutritious diet is, of course, essential. The protein content should be high and the patient must be advised to eat freely of vegetables.

During the period of active exacerbation, rest in bed is important, and we need not point out here, that it is necessary to protect the patient from direct exposure to the sun. Whenever possible, the patient should be sent to a cooler climate during the hot summer months.

We should be inclined to administer arsenic, in the form of sodium cacodylate, given by intravenous or intramuscular injection. Of this, 3 grains may be administered every second, third or fifth day, according to the sensibility of the patient. Calcium sulphide, gr. 1-3, may be given every two hours during the waking day, until the breath and excretions of the patient are distinctly odorous. From 10 to 20 drops of nuclein solution may be ordered, three times a day, or the special hypodermic solution may be given hypodermically.

As a general measure, it is most important to prevent the accumulation of toxic material in the bowels. Therefore, castor-oil, in medium doses, should be ordered once or twice a week. If diarrhea is a feature, enemata of physiologic salt solution are advisable.

It is unfortunate, of course, that pellagra so frequently occurs among the poorer class of whites. Their circumstances often render effective treatment, which of necessity must be prolonged, impossible.



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